EXPLORING THE USE OF MOBILE LANGUAGE LEARNING TECHNOLOGY AS A MEANS FOR URBAN INDIGENOUS YOUTH TO CONNECT TO IDENTITY AND CULTURE

by

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Abstract

This study draws on Anishinaabe teachings and Indigenous methodology such as storywork (Archibald, 2008) to engage urban Indigenous youth in discussions on how they use technology to connect with identity, culture, and language and consider how this may inform cultural and linguistic preservation and revitalization efforts in the future. Beginning each discussion with ceremony, sharing circles and one-on-one conversations were used as methods within this research, further supplemented by field notes. Following traditional protocol in the design, implementation, and writing process ensured participant stories were treated with reverence and minimal interference on the part of the researcher. The stories of participants were organized by considering important pieces of information as stars, and groupings of similar stars as constellations. Reading the sky emerged as a way to acknowledge previous work in language revitalization and consider new directions based on the teachings shared by the youth. The stories shared within this process demonstrate youth’s desire to participate in the creation of digital learning repositories for community members. Social media emerged as an area for increased focus on teaching and learning within Indigenous communities, suggesting prioritizing relationships and online communities is a promising strategy for engaging youth in language and cultural learning opportunities.
Lay Summary

The purpose of this study is to centre urban Indigenous youth voices in discussions on how they use technology to connect with identity, culture, and language learning opportunities. Engaging Anishinaabe protocol to guide sharing circles for group discussions and one-on-one conversations ensured cultural protection for participants and the stories shared within this research. Participants offered ideas on how to better reach a wider audience of urban Indigenous youth while minimizing costs to communities and ensuring the protection of Indigenous knowledges. The desire to build and maintain relationships with knowledge holders was of primary importance to youth within this study and this offers clear motivation for communities to immediately work on creating mentorship opportunities between youth whose primary form of expression and engagement is through technology, and knowledge keepers. Finally, this study serves as an example of Indigenous research existing within the realm of academia in a way that both honours cultural protocols and values and meets scholarly expectations.
Preface

This dissertation is original, unpublished, and independent work of the author.

The UBC Behavioural Research Ethics Board approved this study, Certificate (REB) number H18-00096 and renewed approval for 2019-2020.
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Chi miigwech niikaaniiganaa!
This work is dedicated to all my relations.

To the Indigenous scholars that came before me, laying down the path so that I was able to do the work in a good way, and the young ones yet to come; I hope this work makes your path a little bit easier, and a little bit softer.
Chapter 1: Introduction

The capabilities of smartphones to connect with video and sound, the ease with which one can record high quality video, and the simplicity of uploading information to cyberspace offers opportunities that were simply unimaginable a few decades ago. Furthermore, technology offers a new bridge of communication between the generations of our Elders who are familiar with traditional teachings and cultural knowledge, and youth, who may be more familiar with technology. The relevance of technology for today’s Indigenous youth cannot be underestimated as youth increasingly consider their online personas to be as real as their day-to-day, in-person engagements (Wyman, McCarty, & Nicholas, 2014; Lee, 2014). This dissertation seeks to consider how technology has impacted Indigenous youth identities, behaviours, and values and explore how these might impact cultural and linguistic preservation and revitalization in the future.

Technology has become more accessible and affordable and the control of technology and information is undeniably user-driven, largely due to the increasing popularity of social media (Begay, 2013; Kral, 2010; Rice, Haynes, Royce, & Thompson, 2016). As a result, computer-media technologies increasingly influence the lives of youth and communities who wish to understand how these virtual worlds are influencing Indigenous youth, language and culture (Galla, 2016; Kral, 2010; Rice et al., 2016; Wemigwans, 2018). This speaks to the importance of this research that can then inform how community leaders, educators, and scholars contribute to the design, development, and use of technology-based cultural spaces that respectfully and appropriately represent Indigenous knowledge and engage youth in meaningful ways.
The traditional stories of Indigenous communities and the oral narratives that preserve historical records demonstrate the significance of storytelling, and the reverence with which the process occurs (Archibald, 2008; Gross, 2014). Oral stories contain the history of a people, and validity is of the utmost importance. Language captures the culture, defines it, and is simultaneously defined by it (Gross, 2014). Learning about language and culture engages one in the community and stories are often how the teaching occurs. Within these teachings are the values and it is through these teachings that I find the direction for the research I have proposed: participant-story based, with each voice honoured, and a sacred respect woven throughout. This research can help contribute to modern narratives and scholarly literature about Indigenous people by placing their voices at the centre of the discussion to ensure they speak for themselves, rather than be spoken or written about (Hokowhitu, 2013; Odango, 2015). Utilizing storywork principles developed by leading Indigenous scholar, Jo-ann Archibald (2008) and allowing youth to narrate their own experiences of engaging with traditional language and culture through technology, I explore the intersectionalities of traditional and modern identities, online and in-person spaces, and knowledge keepers and knowledge seekers. By doing so, I hope that this exploration will illuminate the ways in which Indigenous methodologies can centre youth voices while meeting the rigorous expectations of academia. For the purposes of this dissertation, Indigenous will be used to refer to the original inhabitants of a geographic location, but more specific terminology will be used wherever possible. In Canada, the term Aboriginal legally refers to First Nations, Métis, and Inuit people and is often reflected in government documents. I will be as specific as possible when denoting nation or Indigenous affiliation but will use the terms designated in original documents throughout.
1.1 Positioning Myself

In keeping with the teachings on the importance of positionality and acknowledging one’s self (Archibald, 2008; Kovach, 2009; Wilson, 2008) I will explain my positioning. I am an emerging Indigenous academic, as I am pursuing a Ph.D., however, my experience with Indigenous communities is far more extensive. Although I identify as an Anishinaabe (Ojibway) person from Rama First Nation, my mother is non-Indigenous, and I was raised with her. It is for this reason I consider how I walk in two worlds, or more accurately, in a third space entirely. The experience of being raised away from the Indigenous community and the cultural teachings has profoundly influenced my choice of research. As an emerging young Indigenous scholar, I am uniquely positioned to conduct this research and have a vested interest in the topic through my experience of learning my language. There are many dialectical differences within Anishinaabemowin and although I try to utilize the dialect of my community when possible, I often rely on language learning resources from other communities to develop my understanding of the language and increase the frequency with which I can practice Anishinaabemowin. Throughout this research process I continued my language learning journey and sought to incorporate additional learning opportunities for myself, such as through the inclusion of Anishinaabemowin (Anishinaabe language) bird names as the pseudonyms for participants.

I was raised in the non-Indigenous community in and around Calgary, Alberta and started to connect with my Indigenous culture in my late teens when I arrived at the University of British Columbia as an undergrad. As I came to know more about Anishinaabe ways of knowing

1 Indigenous will be used throughout this dissertation to refer to the original inhabitants or First Peoples of an area. Specific tribal names such as Anishinaabe will be used wherever possible, however, Aboriginal, Native, or other terms will be used if that terminology is present in the referenced document.
and the teachings of *minobimaadziwin*, which means living in a good way- a way that respects the seven grandfather teachings and honours the gift of your life- I realized the importance of learning the language as a way to understand the deeper meaning of the cultural teachings, names, and medicines. I have grown up in both urban and rural spaces and occupy a generational divide because I remember a time without technology, such as iPhones and social media, but I now find it hard to imagine living without it in my day-to-day life. My own positionality often feels dual in nature and exists in a space of tension. Given this tension, I am drawn to Nakata’s (2007) theory of the cultural interface as a contested space of discourses since it captures well this duality I experience in my own life. Old ways of going about the world still exist and are increasingly challenged by new ways of doing things, and I often occupy a place that is neither one nor the other, but a bit of both. I sit in a place that is equal parts comfortable with technology and wary of the potential dangers that placing Indigenous Knowledge online brings. I continue to struggle with the desire to engage with new technology, and my preference for the written word.

The fact that I choose to live in an urban space, but desire to learn and live off the land creates a tension for me as I am pulled into this undefined, third space of neither, but both. It is through my existence in this tension filled space that I am inspired to consider how other urban Indigenous youth negotiate the opportunities and complexities of accessing, learning, and utilizing Indigenous language and cultural teachings, as well as how they express themselves in online spaces.

I have been learning my traditional teachings for nearly 20 years now and I have come to connect with the Anishinaabe teachings in a way that I was never able to with the Christian, Euro-Canadian worldviews. The tension in my identity extends here because I was blessed with a loving upbringing in my family and I have been gifted the opportunity to learn traditional
teachings in my adult life. It is this stage of my life that is not easily defined; for how can I fully describe the combination of my two worldviews, other than to say it exists in a third space? I cannot ignore the teachings I gained in the way I was raised, but I am drawn to the Anishinaabe teachings that inform my life’s work and specifically, the way I approached this research.

1.1.1 Who I Am

I am Anishinaabe from Rama First Nation on my father’s side and Polish and English on my mother’s side, which I often state makes me a ‘hybrid’, someone with both Indigenous and non-Indigenous heritage. Although the term hybrid is contested in some circles, it seems to capture my own experience of duality and as such, I have made the choice to claim the term as part of my identity. My spirit name is Giijiigaanikwadok and in English, it translates roughly to “out of the clouds”.

I belong to the ajijak clan, the cranes. Within our community, the cranes are one of the leadership clans and they are also storytellers. Sometimes they are referred to as echo-makers as they share the stories of the community out loud. This Ph.D. is an opportunity for me to fulfill my responsibility to the people, and the youth specifically, by occupying a seat at the decision-making table where I can echo the stories of the community. Within the teachings I have received in ceremony, I understand the reverence with which one must treat stories they are honoured to hear. The participants in this research honoured me with their trust in sharing personal stories, and the research began with ceremony, so I could clearly communicate the respect I had for the stories being shared, and how I would continue to treat the stories during the writing and process of the dissertation. With the work of this dissertation, and in honour of my traditional name, I carry the stories and the teachings from the youth, echoing them forward into the academic conversations about language revitalization, youth identity, and technology.
1.1.2 How I Prepared

This research is part of the requirements to fulfill a Ph.D., and as such, I prepared myself in the same way as many other scholars; completion of a master’s degree, required courses, outrageous amounts of reading, approval of a research proposal, and finally conducting the research itself. This is where the similarities to other researchers are likely to diverge as I also prepared myself extensively in a ceremonial sense. I approached this entire Ph.D. program as a ceremony and continued to ensure that I was operating in a good way based on the cultural teachings in Anishinaabe communities.

In the first year of my Ph.D. I received my spirit name, something that often happens for Anishinaabe people much younger, but the timing feels perfectly accurate for this was the beginning of the most intense growth I have experienced. I received my name at a ceremony in Anishinaabe territory by one of my Elders. In the early spring of that same year, I participated in a fasting ceremony for the first time. This is when a person gives up food, water, and speaking for four days and sits outside alone. During this time, one is considered to be in the spiritual world and prayers are offered and visions sometimes come. This experience was one of the most physically, mentally, emotionally, and spiritually challenging times in my life and I knew that it was happening for the first time in my first year as a Ph.D. student to help me prepare for what was to come. I continued to participate and support the sweat lodge community at the University of British Columbia (UBC) every month throughout the school year. Developing my cultural understandings, learning the name the spirits call me, and fasting was an essential component to complement the academic preparations I was partaking in through the institution.

I fasted in the spring of my second year and was gifted the responsibility of carrying a pipe for the people in the summer that year. I continued my work with the ceremony community
at UBC throughout the year. In my third and fourth year, I fasted again each spring, and attended Midewiwin (Medicine Society) ceremonies in June. In my fourth year of attending Midewiwin I offered tobacco to state my intent of becoming a Midewiwin person. All of these cultural teachings and responsibilities could not have happened at any other time in my life, because this was when I was both most prepared and ready for them, but also when I needed it the most. The ceremonies I participated in, the responsibilities I have been honoured with during this time has helped me balance my heart with my head so that I was not simply focused on the academic work of the Ph.D., but also on the heart work that the community requires of me.

The preparations of my life experience as a disconnected urban Indigenous youth, the rigorous experience of completing a Ph.D., and the ceremonial practice and training has provided me the unique preparations to undertake this work in a good way. This is also why this research will have a unique impact in many ways. The process I have used follows both ceremonial teaching and academic rigor requirements, the stories shared with me by participants are examples of a form of storywork (McCarty, Nicholas, Chew, Diaz, Leonard, & White, 2018) and the role I occupy within my cultural community is mirrored here in my responsibility to echo the stories of participants in a good way so that academics, policy makers, and funders can consider next steps for youth engagement in technology based language and cultural learning opportunities based on the voices of the youth themselves.

The lenses that exist for me when I view the world are that of cultural practitioner, researcher, language, culture, and youth advocate. My Anishinaabe worldview impacts the way I approach research and the world in general. The literature I have been exposed to influences areas that I sought to expand upon, or challenge. All of these considerations reinforce the intent of utilizing the cultural interface by Nakata (2007) as the theoretical framework. Digital spaces
where Indigenous youth gather seem to serve as the cultural interface proposed by Francis and Liew (2009) based on the stories and experiences shared by youth in this study. Relying on the cultural interface to exist in a state of complexity that is often contested in nature creates a space to explore the stories of the participants without seeking a binary explanation of right/wrong rather it allows multiple experiences to exist as truthful accounts of reality (Nakata, 2007). This further supports the notion of storywork utilized by McCarty et al (2018) in that the stories shared are explanatory in the format they were shared and require no analysis to understand. I do, however, offer a contextualization of the stories by way of echoing important highlights. These highlights came to be as a result of noticing as a practice of storyteller and listener, as well as my notes. These highlights are called stars, and the stars are then gathered into constellations of stories. For the purpose of this research, I will re-story what I have heard from participants and provide context to understand them within the intersecting fields of technology, second language learning, Indigenous language revitalization, cultural revitalization, and identity formation.

These stars and constellations illuminate important information about the natural world and provide guidance for seasonal transitions. In the book *Ojibwe Giizhig Anang Masinaa’igan - Ojibwe Sky Star Map* (2014), the authors cite an Elder’s call to reinvigorate “star medicine” and to encourage youth to become “star readers” (p.1). It is worth mentioning that this map is based on the Ojibwe sky or the traditional territory of Ojibwe people and the illustrated map within the book features the North Star at the centre. The constellation *Gaadinaway – Curly Tail/Mishibizhi – Great Panther, “rises in late winter and is overhead in spring. The Ojibwe people knew that when the great cat was overhead, the ice would be thawing, and it would be dangerous to cross lakes or rivers”* (p.10). Further, this constellation exists not only in oral history but also as a pictograph in Ojibwe territory in Northern Minnesota and Ontario. This is one example of
how star knowledge such as this has guided Anishinaabe (Ojibwe) people for millennia to live successfully and adapt and move when necessary. The use of the stars and the night sky to understand life is not unique to Anishinaabe people, or even North America. The Māori people of New Zealand

…derived all kind of omen, message and meaning from the heavens, and believed the stars foretold their fortune and future. In this way Māori star lore was, and still remains, a blending together of both astronomy and astrology, and while there is undoubtable robust science within the Māori study of the night sky, the spiritual component has always been of equal importance (Matamua, 2019, p.2).

It is for these reasons that I considered how the stories that the youth shared during this research might be organized in a way that both draws on Anishinaabe epistemology and creates the opportunity for a narrative re-storying (Kovach, 2010). The constellations and stars shared in this work offer a new form of star knowledge that draws on the same principles of guidance for academics, community members, and policy makers look to further revitalize Indigenous languages and culture.

1.2 Contextualizing the Research

All around the world Indigenous languages are endangered and fluent speakers are in decline, and Canada is not immune to this trend. Language loss is the result of a long history of colonization and forced educational policies (Battiste, 1998; Hermes, Bang & Morin, 2012; Galla, 2016; Noori, 2011). Accelerating language loss rates are further fueled by the increasing migration of Indigenous populations from reserves and rural communities to urban spaces, with over half of the population now residing in cities and towns (Statistics Canada, 2016). This complicates the preservation and revitalization of Indigenous languages because it means
language learning programs, resources, and services accessible in Indigenous communities or on reserves may not reach the majority of the population (Baloy, 2011). It is suggested that it may be easier to learn an Indigenous language and maintain knowledge of it in an area with a high concentration of speakers (Statistics Canada, 2016). The challenge for urban Indigenous people learning language then becomes accessing both resources and fluent speakers of a specific language, in an area with a greater range of diversity.

The Indigenous population is very young, and with an average age of 32.1; almost a decade younger than the general Canadian population. According to Statistics Canada (2016), the Aboriginal population has grown by 42.5% - more than four times the rate of the non-Aboriginal population. They further suggest population projections indicate there could be 2.5 million Aboriginal people in Canada in the next two decades. This is likely the result of more people identifying as Aboriginal, as well as a high fertility rate and increased life expectancy. Within the census reporting, Aboriginal people reported 70 distinct languages, however only 30 of those languages have more than 500 speakers. Within the population that can speak an Aboriginal language, more people indicated this was a second (or third) language spoken, rather than a mother tongue. Although these trends provide some context for this research, this study further acknowledges the generational and social differences in efforts to learn Indigenous languages that have not been fully considered in the literature.

Digital technologies are shaping language, culture, and identity among urban Indigenous youth and the ways in which this is happening, and impacts on Indigenous communities, remains

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2 Reference made to Statistics Canada (2016) will use the language of the associated document which refers to Aboriginal people instead of Indigenous.
largely unexplored. Therefore, I suggest educational researchers are faced with the challenge of how to engage with a youthful population that is increasingly engaged with technology as the medium of social engagement and formal education. Scholars such as Carew, Green, Kral, Nordlinger, and Singer (2015) and Odango (2015) call for greater use of technology and multimedia tools in Indigenous language learning because it is effective, and it appeals to young people. Youth are using technology and social media in ways that had not been thought of, or simply were not possible before, such as using video calling to learn a new language, or by engaging with their peers through apps and other online member-based platforms (Begay, 2013; Kral, 2010; Rice et al., 2016).

Kurzweil (2005) argues that technology uses technology to improve upon itself, so it is not simply improving exponentially, but improving at a rate that is doubly exponential. As technology continues to improve and evolve, it complicates the ability of researchers to provide meaningful and relevant work because of the speed with which these improvements occur. Within the Indigenous community, these issues are complicated further because traditional knowledge protocols do not have provisions for engaging in virtual spaces, or detail how to protect sacred knowledge if it is stored in the cloud, or on a server in another country. This research explores how the practices of learning language and culture, as well as Indigenous knowledge traditions are accessed and mediated through technology.

As Indigenous languages remain in danger of losing fluent speakers, we are presented with adaptable and accessible technology for preserving knowledge with the growing number of interactive websites and applications and information technology (IT) hardware, such as cell phones, tablets, and computers. Much like Francis and Liew (2009), I suggest social media and online environments operate as Nakata’s (2007) cultural interface. The cultural interface
provides a place where cultural definitions and concepts of Indigeneity can be explored and expanded, contested and accepted, and so it is used as a theoretical framework to explore Indigenous language and cultural revitalization and maintenance in these online environments because of the myriad intersections of opportunity and risk that exist with digital spaces.

It is critical to state here that I am not proposing technology be used as replacement to traditional language teaching and cultural pedagogies, but as a supplemental means of communicating teachings on language and culture through means that are readily accessible and adaptable to Indigenous youth. Indigenous scholars Galla (2016) and Wemigwans (2018) offer guidance for how to respectfully engage with Indigenous knowledge and community priorities, such as Indigenous language revitalization in technology-based spaces. Building upon the work of scholars such as Galla (2016) and Wemigwans (2018), this study further supports utilizing technology and social media as a way to engage youth in the important work of Indigenous language expression.

1.3 Research Questions

This research brings together themes of language, youth identity, and technology, which is explored through storywork principles (Archibald, 2008) and influenced by my own Anishinaabe teachings. The central question of this doctoral study is: How does technology influence language and cultural learning and urban Indigenous youth identity development? This central research question allows me to consider a set of sub questions that include:

1. How does technology contribute to urban Indigenous youth culture and language learning?

2. How is technology that focuses on language and cultural learning impacting identity development of urban Indigenous youth?
3. What forms of technology are youth using to assist with their language and cultural learning goals, and what are the learning outcomes?

1.4 Purpose of the Study

This research seeks to explore how urban Indigenous youth utilize technology to connect to language learning, Indigenous culture, and identity. Further consideration is given to how youth preferences, behaviours, and values can impact Indigenous cultural and linguistic revitalization efforts. Through Indigenous methodologies and guided by cultural teachings, conversations in circle and with individuals form constellations of important areas and create opportunities to engage with current research in the areas of language, culture and identity. Given the rapidly changing technology, growing demographics of Indigenous youth, and current landscape of reclamation and revitalization of Indigenous practices, this study echoes the voices of urban Indigenous youth in a good way that embodies the teachings of minobimaadziwin (living in a good way), so that academics, policy-makers, and community leaders are able to inform their decision making with youth stories.

1.5 Theoretical Frameworks

As stated in earlier parts of introducing the dissertation, I am drawn to Martin Nakata’s work on the cultural interface (2007) as it reflects my own experiences of identity and learning. In turn, I use this theory to inform my research study as it offers an Indigenous framework to explore the research questions concerned with the complex issue of Indigenous identity development and the intersectionality with language and cultural learning. I also draw on a second theoretical framework of second language acquisition (SLA) to further develop the context of this study within the broader conversation of language learning theory. While SLA offers myriad research that is of value to Indigenous language revitalization (ILR), for the purpose of this study, I
specifically consider sociocultural theory and its impacts of the field of ILR to best situate this work.

1.5.1 The Cultural Interface

The cultural interface provides an ideal theoretical framework for this study as it can be easily adopted into the complicated space that brings together traditional teaching, languages, and knowledges, with modern technology. Nakata (2007) writes:

The cultural interface is constituted by points of intersecting trajectories. It is a multi-layered and multi-dimensional space of dynamic relations constituted by the intersections of time, place, distance, different systems of thought, competing and contesting discourses within and between different knowledge traditions, and different systems of social, economic and political organization. It is a space of many shifting and complex intersections between different people with different histories, experiences, languages, agendas, aspirations and responses… it is also a space that abounds with contradictions, ambiguities, conflict and contestation of meanings that emerge from these various shifting intersections (p. 199).

Nakata is a Torres Strait Islander scholar exploring the theoretical identity debate of Indigenous Islanders and non-Indigenous Australians, so although the experience of Canadian Indigenous individuals may not be exactly the same, I apply the theory to explore urban Indigenous youth intersectionalities of identity, language and culture learning, and technology.

Experiences between Indigenous people who live on reserves that are in rural areas are drastically different from those who live in urban spaces. Connection to community, access to fluent language speakers, knowledge of ceremonial community, even information about community events can vary greatly among individuals, both on and off reserve. Utilizing the
cultural interface to explore these “shifting and complex intersections between different people with different histories” (p.199) creates a space that allows for multiple experiences and interpretations of the same time and space. The application of the cultural interface theory to Canadian urban Indigenous youth identity development and cultural/linguistic learning serves the following goals: 1) enhancing the understanding of how urban Indigenous peoples engage with identity issues; 2) developing a greater appreciation and utilization of technology as a learning tool; and 3) youth self-identifying in a way that is not dependent on the colonial narrative (Nakata, 2007).

Nakata states that “any new theoretical approach must be open to the idea that Islander [Indigenous] experience is constituted in complex sets of social and discursive relations” (2007, p. 201). The experience of technology in the hands of urban Indigenous youth seeking out a strong linguistic community with which to learn and maintain their language is an example of a complexity that does not exist for Indigenous people who have access to many language speakers, via reserve community or other traditional community structure (Statistics Canada, 2016). Much as Francis and Liew (2009) suggested, Indigenous online presence creates the cultural interface proposed by Nakata (2007), and I apply this theory to the consider how technology can create a strong linguistic and cultural community network for urban Indigenous youth in the form of a space that is neither on- nor off-reserve but in cyberspace. Further, these types of social and discursive networks in the form of apps and social media platforms might bring disinterested youth into the discussions about Indigenous identity, language revitalization and academic research (Baloy, 2011; Rice et al., 2016; Wyman, McCarty, & Nicholas, 2014).

The goal of this study is to apply the cultural interface theory to an exploration of the intersections of technology, cultural and language learning, and identity development for urban
Indigenous youth by considering priorities, critiques, and desires that are defined by the youth themselves during the research process (Nakata, 2007). I kept in mind the suggestion by Francis and Liew (2009) that the cultural interface is cyberspace, and while I agree with this to some degree, I find that there are more layers of complexities as Nakata would say, that truly combine to create the interface in its entirety. The theoretical framing of the cultural interface and teachings from Anishinaabe principles that view chaos and unexpected events in life as opportunity (Gross, 2014), have created lenses for me to approach this research in an open manner that both incorporates Indigenous theory and epistemology and honours Indigenous youth voice.

1.5.2 Sociocultural Theory Within Second Language Acquisition

The field of Second Language Acquisition (SLA) is concerned with what the second language (L2) learner come to know and do they learn a second language? SLA theorists closely followed the scientific thought process, moving through poststructuralism, constructionism, phenomenology, interpretivism, and more recently, into the area called sociocultural theory (SCT). Krashen (1981) proposed the monitor model as a challenge to behaviourism. The five hypotheses of Krashen’s monitor model were based on acquisition and learning of language, monitoring or editing what they have acquired, naturally ordering what they have learned, comprehensible input to build on what has been learned, and the affective filter – a term used to reflect learner anxiety or negative attitudes that filter out appropriate input. This theory was largely discredited due to the inability to test it empirically, however, it did inspire other theories as it was published during a time in the early 80s when SLA was moving towards contextual learning. Sociocultural theory emerged in the early 90s and represented a ‘social turn’ in SLA away from positivist theories to consider experiences, agency, identity, and subjectivity in L2
learning. Duff (2007) specifies SCT as; concerned with human development, considers human interaction a fundamental process of learning, and that learning is a “socially constructed, historically (or temporally) situated cognitive phenomenon” (p. 312). Norton (2013) revisits SLA theory arguing “the refusal to name and address power relations [within SLA theory] limits our ability to do justice to the complex experiences of language learners across historical time and social space.” (p.168). Lightbown and Spada (2013) further clarify that “sociolinguistic theorists assume that the cognitive processes begin as an external socially mediated activity and eventually become internalized” (p. 120). This concept differed from other interactionist models in that it suggests external rather than internal, cognitive processing.

Onowa McIvor (2012) also considers sociocultural theory in the framing of her dissertation suggesting the development of this area offered “greater relevance to [Indigenous second language learning] ISLL” (p. 41). She points to the emergence of research on heritage languages as a result of sociocultural theory as offering “valuable contributions to the understanding ISLL through attention to common topics such as identity and the influence of the dominant language on attempts at learning” (p. 42). McIvor’s reminder that the urgency of Indigenous language revitalization creates impetus to draw on whatever research is available in various disciples to “contribute to theory development in those related fields” (p. 42). It is for these reasons that I also consider the influence of SLA theory, and sociocultural theories in particular, on this study.

Superdiversity is a relatively new linguistic theory that is based on migrant language use in urban spaces. The superdiversity theory as discussed in Deumert (2014) is based on the idea that the complexity among the migrant population in Britain is no longer easily defined by one simple descriptor. There exist myriad identities within the immigrant population that has resulted
in a diverse population of diverse immigrants which is doubly, or superdiverse. It is proposed that in order to adequately address the complications of Indigenous identity in Canada, and the intersections between language learning and identity, it could be beneficial to consider how we might adapt theories from other areas of social sciences such as superdiversity.

Applying this theoretical definition to the Indigenous population in Canada would allow for a more accurate understanding of the Indigenous identity in Canada and acknowledge the plurality of identities that exist for Indigenous people (Kovach, 2016). The increasingly urban Indigenous population, which often claims more than one residence, and sometimes more than one cultural identity, mirrors the superdiversity theory and its component of new migration patterns emerging within a migrant population. Additionally, compared to the general Canadian population, the average age of Aboriginal people is 32.1, a full decade younger (Statistics Canada, 2016). This younger, metropolitan Indigenous population is exposed to more technology on a more regular and reliable frequency than their counterparts who reside on reserves in rural areas due to the inflated cost of shipping, obtaining, and maintaining technology (Galla, 2016). This younger, more mobile population meets all three components of the superdiversity theory that considers mobility, complexity, and unpredictability in its definition (Deumert, 2014).

Applying the repertoire superdiversity logic suggested by Blommaert (2013), I suggest that relying on an urban/rural binary, or even on/off reserve binary to describe Indigenous identity is no longer accurate. This is due to the ever-changing realities of Indigenous people, including reserves that exist within urban metropolitan areas and the influence of the Internet and subsequent formation of online communities that blur the lines of influence and community membership. Although superdiversity is a western concept, the creation of a theory that creates space for intersectionality in identity, language learning experience, and community connections
provides an opportunity for scholars seeking to come to understand Indigenous ways of acknowledging identity in a framework that draws on western paradigm. Superdiversity acknowledges increasingly complex layers of diversity that challenge essentialist understanding of hybridity and offers an alternative to the term hybridity, which could be misused to dismiss revitalization in favour of multiculturalism a version of essentialized identity like status of blood quantum measures of Indigeneity.

Within this space of considering applications of superdiversity, Blommaert and Backus (2012) suggest further distinctions must be made between what is learned and what is acquired. Acquisition suggests an “enduring outcome”, while learning does not, because one can “unlearn, or forget” (p.7). They explain that discursive and sociocultural features of language learning can be temporary and dynamic. For example, one can only speak as a teenager, while a teenager, after that age you have lost that repertoire and it becomes imitation. “Learning language as a linguistic and sociolinguistic system is not a cumulative process; it is rather a process of growth, of sequential learning of certain registers, styles, genres, and linguistic varieties while shedding or altering previously existing ones” (p. 8). They further suggest:

Repertoires are individual biographically organized complexes of resources, and they follow the rhythms of actual human lives. This means that repertoires do not develop in a linear fashion. They develop explosively in some phases of life and gradually in some others (p. 8).

These ideas suggest there is superdiversity within each individual’s linguistic skills and that we never truly finish learning language.

Blommaert (2013) defines communicative competence as acquiring multiple normative orientations and shifting them into multiple places. For example, being able to operate
successfully in social contexts means switching conversational styles from classroom to Facebook, back to the classroom, all based on one’s age and gender group; and each situation requires a different repertoire for every space. I would suggest we are now blurring the lines of superdiversity and repertoire even further – what is appropriate in-person is increasingly based on what happens online, yet research and educational structures have not caught up or acknowledged this fact.

McIvor (2012) considered Indigenous second language learning (ISLL) to be a separate theoretical framework from sociocultural theory and second language acquisition (SLA), however, while I also acknowledge the origins of ISLL within the community that shaped the development of the academic research, my introduction and understanding of the area has been through academic literature and thus shaped my understanding of ISLL as influential to my work, but categorized in a similar vein to sociocultural theory. The principles of connection McIvor drew upon between ISLL and her own work, “emphasizing practices focused on creating new speakers, encouraging social justice, and recognizing the uniqueness of second-language learning in Indigenous contexts due to the colonial dynamic” (p. 41), are critically important, but I did not distinguish between ISLL and sociocultural theories of SLA because my exposure to Indigenous language revitalization practices (ILR) were rooted in my explorations of SLA.

Indigenous language revitalization (ILR) scholars such as Henze and Davis (1999), Simpson (2011), Baloy (2011), Hermes, Bang, and Morin (2012), McInnes (2014), and Galla (2010, 2016) provided the framework for my understanding of ILR efforts within communities as well as academia. Having developed my own informal language learning practice as an urban Indigenous youth and then formally exploring language learning as an educator, I discovered the work of Indigenous scholars as result of SLA and sociocultural theory. Hermes, Bang, and Morin
(2012) and Galla (2010, 2016) challenge applications of sociocultural theory to ILR because it does not incorporate and acknowledge the unique requirements of Indigenous language, culture, or priorities. Similar to McIvor’s (2012) suggestion that Indigenous language practitioners draw on literature that offers anything of value to revitalization efforts, these scholars further shaped my understanding of ILR and sociocultural theory within SLA as they often critiqued the limits of SLA while acknowledging useful aspects of the field. Therefore, my understanding of ILR is contextualized from my own lens of discovery while simultaneously acknowledging the distinct differences of learning Indigenous languages as opposed to the primarily European languages that shaped SLA theory and heritage languages that further developed sociocultural theory. Engaging with ILR scholars that acknowledge the role of ceremony, community, and the colonial context of learning an Indigenous language provided a lens for my own theoretical understanding of this dissertation. McIvor (2012) highlighted similar principles within her theoretical framing of Indigenous second language learning (ISLL) thus, I suggest my understanding of ILR and hers of ISLL are interwoven, if differently named. I further draw on McIvor’s work for the reminder that the urgent need to revitalize Indigenous languages requires scholars to draw on all research of value to continue the work, going beyond the bounds of traditional disciplines if beneficial to the practice. This dissertation draws upon and builds on scholars of both SLA and sociocultural theory, as well as that of ILR scholars such as McIvor (2012), Galla (2016), Hermes, Bang, and Morin (2012) amongst many others to be discussed at length in the following chapter.

1.6 Star Stories (Research Design)

The research design started to form many years ago with my professional experience working with Indigenous youth. I realized I could learn more about youth perspectives by having
informal, culturally grounded conversations with them and began to consider how I might incorporate this knowledge into my future. While completing my Master of Education degree, one of my professors suggested I look at doing a Ph.D. study that focused on engaging youth voice in conversations about impacts of technology on language and cultural learning and identity. During the beginning of this Ph.D. program I was exposed to a number of academic Elders including Margaret Kovach (2009), Jo-ann Archibald (2008), and Shawn Wilson (2008). These three scholars in particular were foundational to shaping my understanding of how one can utilize Indigenous methodologies in research design. I knew at this point that I could ground my work in Indigenous epistemology and ontology, while fulfilling the academic rigour requirements of the post-secondary institution. Throughout the five years of my program I knew I wanted to offer this dissertation to the Indigenous community as my appreciation for all that I have come to understand. This required meaningful consideration of how I would share the results of this study in the written and oral word. While I knew the dissertation would unfold in story format, I was encouraged not to force a metaphor as a means to organize and interpret my doctoral research. Rather, I should allow the experiences of the research process and results to guide me. Further, the cultural teachings I was receiving in tandem with the Ph.D. program about the sky world, my clan, and the responsibilities within associated with this knowledge finally coalesced into how the participants’ stories could be honoured, connect to current literature, and create opportunities to share with the community in a clear and impactful way. Thus, the stories of the participants (each provided a pseudonym of a bird in Anishinaabemowin) became bird songs and the important pieces within the stories became stars. I then used these stars to create constellations and finally, I read the stars and the constellations as I would read the sky by remembering and re-storying what I had learned (Kovach, 2010; Lee, Wilson, Tibbetts &
Gawboy, 2014). The process of how Anishinaabeg (Anishinaabe people) and other Indigenous people around the world utilize astronomy to “predict and plan” (Lee, Wilson, Tibbetts & Gawboy, p.1) informed the process as a metaphor for how to read the new sky stories emerging from this research and determine how other scholarship connected, challenged, or missed the stars and constellations shared with me by participants. A more detailed methodological process is provided in Chapter 3.

1.7 Structure of Thesis (Chapter Outlines)

In Chapter 1 I set out the context for this work, journeying through my process as researcher and Anishinaabekwe (human woman). This first chapter further lays out the important highlights of the study purpose, research questions, theoretical frameworks, and the research design.

In Chapter 2 I provide a review of current literature in related fields to this study. This detailed reading of existing research further provides the context necessary to understand the current conversations surrounding urban Indigenous youth and the connection to technology, language, culture, and identity.

In Chapter 3 I lay out the research methodology in detail. This begins with the positioning of my role as researcher, which I understand as listening to stories from relatives. From there, I provide a review of research examples that have influenced the research design in for this study and further explores storywork as a methodology (Archibald, 2008). The knowledge gathering (Hare, 2001) process is explained as both gifts and responsibility and provides further details of each method used within the process. The analysis portion of the methodology is better described as a meaning making process and provides an explanation of how I found the stars within the stories.
In Chapter 4 I describe how I come to understanding, or what some may think of as findings. Within this section I echo the stories, which have been called bird songs, that were shared with me by participants. I then delve further into how I saw stars emerge out of the stories. Finally, I lay out the constellations that emerged from looking at the stars and discuss the process of forming the constellations and deciding how to name them and determine their respective size and influence.

In Chapter 5 I re-story the sky (Kovach, 2010). I consider the stories told by current literature on the topics considered in this study and seek out overlap between the new constellations and old. These stars and constellations are further configured within the context of the research questions. Finally, I contextualize these findings within previous research and theory, identifying stars that encourage re-thinking and re-considering previous understandings and point out new stars as emerging areas of importance and opportunities for learning.

In the sixth and final chapter, I summarize the research and discuss the strengths and limitations of this study, further considering the implications these new constellations and stories offer the broader academic discourse. Lastly, I offer guidance for future directions by using these stars and constellations as a map.
Chapter 2: Reading Old Stories (Literature Review)

This research engages with urban Indigenous youth to understand their experiences with mobile technology that language learning, cultural engagement, and expressions of identity. The literature reviewed here incorporates research about learning Indigenous languages, reviews the use of technology in learning second languages, engages with the complexities of Indigenous youth identity, considers how youth are occupying and utilizing technology and reviews the ways in which Indigenous Knowledge is being shared online.

2.1 Indigenous Language Revitalization in Canada

Aboriginal language fluency is on the decline, a trend continually noted in Canadian census data (Statistics Canada, 2003, 2008, 2011, 2013, 2016). Often, the majority of first language speakers of Aboriginal languages are elderly and when they pass away, the language knowledge is lost with them. Although the census also shows an increasing number of language learners, with only one in four Aboriginal people speaking their ancestral language, the ongoing decline and potential loss of language knowledge is of paramount concern. These languages reflect the distinctive histories, cultures and identities and are linked to family, community, land, and worldview. The average age of Aboriginal people in Canada is 32, the population is growing quickly, and nearly 60% reside in a metropolitan area (Statistics Canada, 2016). As the population continues to grow and is increasingly located in urban areas, a review of targeted revitalization efforts is required as “Native language revitalization efforts are overwhelmingly located in rural environments, despite the fact that [A]boriginal people are increasingly choosing to live and raise families in urban settings” (Baloy, 2011, p. 515). The ability to learn an Indigenous language in an urban space is complicated by the diversity of Aboriginal language groups that are found in urban centres (Statistics Canada, 2016).
Many Indigenous languages are verb-based and focused on the actions that the word is describing, rather than emphasizing the noun, or the label affixed to the item or process. This distinction is hard to capture in English, but it speaks to the epistemological belief that life is in everything, and every process is a dynamic, ever-changing thing. McInnes (2014) writes of the inherent ability of Ojibwemowin (the Anishinaabe/Ojibwe language) to adapt to new innovations such as technology and theories “as any living language must” (p. 752). Although this adaptation is in reference to modern concepts, the Creator gave us the language “as a means of sacred communication” (p. 753) according to the traditional teachings. In Indigenous cultures we are taught that language is our culture, and culture is our language. Without language, we cease to exist as unique people and we lose our ability to communicate in the sacred way with the Creator. McInnes goes so far as to say, “not only are age-old ceremonial and cultural practices threatened by the loss of language, so too may be the existence of the Nation itself” (p. 753). This statement demonstrates the dire language loss circumstances in which Indigenous communities find themselves, and as such, it also highlights the critical importance of collaborating with scholars from diverse fields in order to ensure language and cultural survival (Simpson, 2011; Pitawanakwat, 2013; Gross, 2014).

Part of the way we ensure our cultural and linguistic survivance is through teaching language to the next generation (Vizenor, 2009; Simpson, 2011; Pitawanakwat, 2013; Gross, 2014). Vizenor (2009) reminds us, “Native survivance is an active sense of presence over absence, deracination, and oblivion; survivance is the continuance of stories, not a mere reaction, however pertinent” (p. 85). There is growing emphasis on the importance of teaching across generations to acknowledge that knowledge transmission is not simply one-way (Odango, 2015). Without our stories, our histories become lost, and without our language, the values and meaning
behind the stories becomes weakened. This is part of the reason Indigenous language revitalization (ILR) is so personal; it is part of our responsibility as Indigenous people to ensure the gifts culture and language carries on. The cultural teachings we are given about our language undoubtedly influence our investment in language learning, and complicate questions of how to do so most effectively and efficiently.

Henze and Davis (1999) note that ILR “cannot be viewed in piecemeal fashion” because it “involves cultural change, language change, education, political and economic coalition building, and language planning” (p. 8) while Hermes, Bang, and Morin (2012) acknowledge that ILR is “passionate, political, and deeply personal” (p. 2). This is partly due to the legacy of assimilationist policies aimed at eradicating Indigenous language, but also likely because attempts to develop ILR are often rooted in western thought rather than Indigenous epistemologies. It is for this reason that scholars such as Leonard (2017) consider Indigenous language reclamation to be a more accurate term that encapsulates the unique work of Indigenous language scholars of going beyond traditional revitalization efforts of increasing speaker numbers and fluency to include cultural teachings and context. Although I concur with the distinction, a great deal of the literature in this area still relies upon the term revitalization. Henze and Davis (1999) suggest the decision “to maintain or renew a threatened language must be made by the speakers of that language, not by outsiders…no matter how well intentioned” (p. 3-4). They call for voices of Indigenous people to publish in all areas related to language renewal, which has happened since 1999, but perhaps not quick enough to meet the needs of community, as more recent literature from Indigenous experts in the area repeat the same request (Lee, 2014: Odango, 2015). Henze and Davis (1999) note that identity and authenticity are two issues that come up in ILR repeatedly, and this has not changed since then, in fact it may only be
more complicated with the concepts of multiplicity and hybridity expressions of Indigeneity. The traditional teachings in our communities respecting multiple truths and individual experiences as valid are critically important to incorporate into ILR efforts, but most important here is the consideration of holism. Essentially, that is what Henze and Davis (1999) were asking for, without explicitly calling it such, when they pose the question, how can ILR respectfully acknowledge these complexities while creating success for revitalization initiatives?

Most scholars note that the drive for formalized ILR came out of community aspirations, but this is complicated by the fact that Indigenous languages have been recorded, documented, and in some cases, maintained by work done from outside the community – with or without permission. History demonstrates the origins of this process with missionaries attempting to document language through dictionaries and translations, but the intent of this work was to steer Indigenous people away from their language and culture or manipulate language towards colonizing ideologies (Battiste, 1998; Henze & Davis, 1999). Much of the literature on this topic points to the early 90s as the beginning of sustained ILR efforts, particularly in the continental United States and Canada. Henze and Davis (1999), McHenry, (2002), Galla (2010), Hermes, Bang, and Marin (2012), and McIvor (2010) all draw attention to Fishman’s 1991 work on language shift in Indigenous communities. This was some of the first widely available scholarly literature in the area, and also drew attention to the endangered state of Indigenous languages. Henze and Davis (1999), Ottmann, Abel, Flynn, and Bird (2007), and Hermes, Bang, and Marin (2012) offer an important reminder that the ‘limitation’ of ILR work is based on an assessment of the scholarly publication of ILR work, and should not be considered an exhaustive view of the work actually being done to revitalize language in the community, as there is likely work occurring that may not be part of a formalized academic study. Even so, the area remains one of
the more sparsely documented areas of language learning scholarship. Henze and Davis (1999) suggest the area began to receive more attention at this time in part due to the Native American Languages Act (1990) within the United States, likely due to the potential of obtaining funding to meet requirements within the act. In 1993 the draft version of the United Nations Draft Declaration on the Rights of Indigenous Peoples was shared, further drawing attention to the state of Indigenous languages. Although this document was officially adopted by the General Assembly at the United Nations in 2007 as the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), many of the policies and declarations within have yet to materialize, with Canada formally indicating support in 2016.

Re-awakening and revitalizing languages are included as Action 13, 14, and 15 as key recommendations of the Truth and Reconciliation Commission of Canada (2015) report, and as such it is possible to contribute directly to the process of reconciliation through respectful research with Indigenous communities focusing on traditional languages. Ongoing discussions at the federal level for a framework to protect Indigenous languages contribute to provincial initiatives supporting revitalization efforts as well. Although declarations or even implemented legislation do not guarantee action in communities, it certainly creates an opportunity for collaboration, and brings further attention to the endangered state of Indigenous languages. International legislation exists in the form of the UNDRIP (2007), and the Native American Languages Act (1990) in the United States of America, all of which provide another opportunity for scholars to share their research on a worldwide scale. More recently, the Government of Canada introduced Bill C-91 the Indigenous Languages Act which works to “reclaim, revitalize, strengthen and maintain Indigenous Languages in Canada” (Canadian Heritage, 2019). As 2019 is further designated as the year of Indigenous Languages by the United Nations, there is ample
evidence that research and action on Indigenous language work is a timely and important area of scholarship.

2.2 Technology in Indigenous Language Revitalization

New technologies are offering second language acquisition (SLA) theorists and second language (L2) instructors new territory to explore, and this medium is also being explored in the ILR field as well. From the beginnings of McHenry (2002), Haag and Costen (2002), and Auld (2002) exploring the use of CD-ROMs and new interactive opportunities for L2 learning on computers, to more recent studies on entirely interactive websites (Brand, Herbert, & Boechler, 2016) and a wide variety of explorations on mobile devices and apps (Dyson, 2016; Kemper, 2016), scholars are continuing to explore the ways in which Indigenous people are adopting and adapting technology for ILR.

Indigenous language revitalization (ILR) efforts have continued to adapt as new technologies emerge. Language documentation and conservationists have produced a number of dictionaries and language curriculum documents, beginning with translated bibles from missionaries shortly after contact, evolving to adaptable app platforms for Indigenous communities to utilize on their own (Fast, 2009). Often, the development of ILR efforts mirrored theory and practice of second language acquisition (SLA) scholarship. Both Galla (2010) and McIvor (2012) offer a similar overview of approaches to Indigenous language teaching and learning: formal education opportunities in classes, immersion schooling, language nests, language camps, and individualized approaches such as the Master-Apprentice (MAP) model, or simply utilizing instructional books and flashcards for memorization. Although McIvor explores the adult language learner experience specifically, ILR efforts for youth and adults are often one and the same, with a great deal of the scholarly literature focused on young learners’ (under 10
years old) experiences. These efforts result in varying degrees of success, but as McIvor notes, these approaches do not always result in fluent speakers. Further, immersion-based approaches and MAP, in particular, require a great deal of investment of both time and money. Galla draws on technology as a means to overcome some of these limitations and considers the practical benefits of adapting ILR efforts to include technology or be entirely technology-based.

Scholarly literature on digital mediums as a tool for language learning is an emerging field, particularly as it relates to Indigenous communities (Morris, 2016). Haag and Costen (2002) describe how the Choctaw Nation used technology to teach their members the language beginning in the late 90s. This program was originally offered via computers in a classroom on the reservation to relatively small numbers of participants and it grew over time. The computer-assisted language learning program was one of the earlier forms of technology being used to disseminate language to nation members but faced challenges, including restrictions to only accept students if they are on-reservation community members, a limited number of students comfortable with technology, and few locations with the physical technology to support such a program. McHenry (2002) describes the work of Tulalip Elementary School in the Pacific Northwest to create a website for Lushootseed language learning. She mentions the use of CD-ROM as a mechanism for sharing the language tools among the family, further demonstrating how quickly preferred methods of knowledge sharing are changing as many laptops are now built without CD-ROM drives. Auld (2002) explores the use of computer-assisted language learning in an Australian Indigenous community, and while the community was open and engaged in the process, the desire of the community outnumbered the computers available. Hermes and King (2013) explore the use of computer-assisted language learning in the homes of two families over four years, and suggest it is a helpful way to start language learning and
positively impact family dynamics. Each of the studies focused on learning language within a set time frame and while students achieved some skill in the language, aging forms of technology restricts ongoing opportunities for language learning and maintenance.

While computer assisted language learning (CALL) is still in use, Galla (2010) describes the rise in the use of practical applications and how these technologies enhance language learning. Building on the work of Galla, Begay (2013) highlights language learning tools in digital formats and explored the use of mobile apps in language learning, acknowledging both their effectiveness as a tool, and their growing popularity in the community. Noori (2011) also calls for language speakers to be wherever the learners are- including wireless environments. Carew, Green, Kral, Nordlinger, and Singer (2015) note that in their research, Elders were calling for the creation of language learning apps as means to connect with the youth of the community, a similar notion to one that was shared with Galla (2016) by a participant in her recent survey;

[Technology] will never replace people or speakers, but it helps to amplify their voices across time and distance. It is helping to bring young and old together in ways that other approaches have not in the past [participant quote]. (p. 1147)

Galla surveyed 80 language learners, educators, and community members to explore how technology effects language teaching and learning while considering contextual factors of the respective communities. The results indicated technology offers positive benefits to language teaching and learning efforts so long as unique community contexts are considered during in the planning, design, and implementation stages of potential applications.

Kemper (2016) and Morris (2016) review long-term language learning approaches in two American Indian communities ranging from newspapers, to CD-ROMs to apps, demonstrating
that while technology as a means of assisting in language learning is not new, the preferred formats are changing. Brand, Herbert, and Boechler (2016) offer a history of the website First Voices™ as an example of e-learning for Indigenous languages. First Voices™ demonstrates how one might create a language app or online learning platform for an Indigenous language, and how communities can adapt the shell to fit their own needs. The Indigenous components of storytelling have already been incorporated into the format, and the company understands the importance of traditional teachings. There are already many communities utilizing this adaptable app format, with a wide selection of languages available online including 13 community-specific apps, as well as one general-use app that can bring Indigenous language keyboards to any iOS device. First Voices™ also validates the possibility of hosting community in online spaces with a balance of information that is public, and some that remains password protected for community member access only.

There are many technology-based Indigenous language learning tools available today. Many apps are downloadable at low or no cost on a wide variety of platforms. Websites and blogs exist in increasing numbers that offer Indigenous language learning documents to anyone able to access the Internet. The growing number of online pedagogical tools and resources offer a promising means for language learning. The increasing availability also means a range of choices for Indigenous people looking to connect with specific languages and through their preferred platforms. One of the newer sites of engagement between technology and language in Indigenous communities is via social media such as Instagram, Facebook, and Twitter. Scholarship exploring social media and Indigenous people is particularly limited given the recent emergence of social media within the past decade, however there are areas of social media research that can offer some insights to consider.
Language learning applications of technology outside the classroom often emerged as the result of community desire and as a means to combat insufficient teacher staffing. Some communities reached out to linguistics and language professionals for assistance, others implemented their own programs without help (Auld, 2002; Haag and Coston, 2002; McInnes, 2014). The possibilities for self-directed learning are unprecedented thanks to technology and the ubiquity of the Internet. Although new technologies and students’ comfort with them is still being met with distrust by many teachers (van Praag & Sanchez, 2015), there is also a possibility for non-Indigenous scholars to adapt some of the ILR strategies in their own practice. Ottmann et al. (2007) consider action learning and experiential learning such as informal conversations or discussions with family members an important component of second language learning (L2), which could easily apply to non-Indigenous L2 learners’ experiences in digital spaces. The ongoing work of ILR scholars demonstrates myriad successes and highlights new possibilities for Indigenous presence in online spaces and through technology, particularly for language preservation and new learning opportunities.

2.3 Indigenous Youth Identity

The Indigenous identity is an inherently complex concept; not only because of the diversity that exists, but also because within Canada and a few other countries around the world, the Indigenous identity is legally defined, originating out of colonial legislation that is still in place today. Indigenous people increasingly reside in urban centres, with over half of the population living in major city centres and many of these residents claim more than one residence (Statistics Canada, 2016). Additionally, the population is extremely young with over half the population under the age of 25. Within these populations, there are multiple identities at play, often within the same individual (Baloy, 2011; Hokowithu, 2013; Kovach, 2016). One of the most common
dichotomies that persists when discussing Indigenous identity is that of ‘traditional’ versus ‘modern’. Increasingly, Indigenous individuals practice some aspects of traditional culture while participating in the modern society as well, creating a hybridized identity of sorts (Nakata, 2007; Baloy, 2011; Hokowithu, 2013). With the increase of technological capabilities, and the familiarity and skill level of Indigenous people in digital spaces, there is an ever-increasing trend in the creation of online communities that are blurring the lines of ‘reality’, further complicating issues of identity and belonging (Kovach, 2016; Thorne & Smith, 2011; Nakata, 2007).

Indigenous identity in Canada is multifaceted, but legally it remains determined by historical, colonial assumptions and attached to a legal status. For example, the Indian Register is the only official measure of Indigenous identity accepted by the government; if one is listed on the register, then one is considered to have Indian status. Tracing your ancestry to this register is the only way to obtain federal Indian status and pass it on to your children. Even so, this lineage is limited by regulations imposed by the government. Another limitation of this status exists for Indigenous groups that straddle both sides of the border between the United States and Canada. One example is the Blackfoot Nation in Alberta. They traditionally occupied both Canada and the United States, prior to the border being created. Although the United States legally recognizes Canadian Indian people, the Canadian government does not reciprocate, hence the Blackfoot Nation members from Canada are recognized in America, but not vice versa. There are many reasons offered as to why this may be; often it is considered to be because of potential costs of accepting the fiduciary responsibility for the additional people. Regardless, the identity of Canadian Indigenous people remains highly regulated, and controlled largely by the colonial-imposed government.
A second component of the Canadian Indigenous identity is band membership, which, much like federal Indian status, is also determined by ancestry as recorded in legal documents. It is important to note here that band membership and federal government status as an Indian person are not mutually reinforcing – one can exist without the other. However, as Alfred and Corntassel (2005) point out, even for bands that have their own membership policies, they are still contained within, and defined by, the legal and economic system of the oppressor. Legal policy and amendments such as Bill C-31 have further complicated this issue by restoring some legal status to First Nations individuals that had lost status through enfranchisement through marriage to a non-Indian, foreign residence, or enfranchisement. When these amendments were implemented however, they did not result in full status being provided; it became a subset or reduced version that further limits the ability of an individual to pass status on to their children. The ramifications of such a policy often results in families being split along lines of status; children within the same family may not have the same status ‘level’, and this can, and has resulted in individuals being removed from First Nation reserves. Whether this is intentional or not, statistically speaking, limitations on how far an identity can be passed down in a population while retaining legal recognition will result in the eventual eradication of First Nations people in Canada. These restrictions on the Canadian Indigenous identity were created hundreds of years ago—often with an assimilationist purpose in mind. It is for this reason that self-determination of Indigenous identity is a critical issue in Canada and around the world (Alfred & Corntassel, 2005; Coulthard, 2007; Nakata, 2007; Hokowhitu; 2013).

Although the work of academics such as Alfred and Corntassel (2005) and Coulthard (2007) is often peppered with (justified) criticism of government imposition of identity on Indigenous people, their work can be seen to create a hard line that defines what it means to be
Indigenous and does not allow for any flexibility or hybridity to emerge. The Indigenous identity in Canada is contested, debated, and complicated. This is in part due to the construction of the Indian Act in 1867, which legislated the Indian identity based on Christian, patriarchal, essentialist, and racist assumptions made by early settlers, but the debate is further complicated with issues surrounding environmental and resource development on Indigenous territories and the rights of Aboriginal people to the land and the resources on it (Blackburn, 2009; Frideres, 2008). Economic factors that affect the whole of Canada are thus exponentially complicated for those with Indigenous identity. There is a plethora of research on the negative aspects of imposed identities, but little research on the very impact these policies have on Aboriginal youth (Chandler, 2013). The research that does exist often focuses on a mental health or educational aspect of identity, thereby limiting the exploration to the impacts within a certain area. The legal implications that exist for First Nations identity mean scholars are often forced to position themselves in a hardline manner, but with the ongoing technological improvements, scholars are likely to find it increasingly difficult to find a standard definition of Indigenous that is uncontested or equally applicable across Canada.

This rigid approach to identity further affects Indigenous youth in a negative manner because it does not allow for the multiplicity of identities that scholars are coming to acknowledge (Hokowhitu, 2013; Lee, 2014; Thorne, Sauro & Smith, 2015). Furthermore, the work of Indigenous scholars that call for stringent definitions of identity risks alienating, or potentially further marginalizing, an already marginalized population such as urban Aboriginal youth (Chandler, 2013). Requiring Indigenous people to speak their Indigenous languages to affirm their identity as Alfred and Corntassel (2005) suggest ignores the effects of residential schools on survivors and their families. Both of these examples also deny the ability to claim
Indigenous identity by adopted individuals raised away from traditional communities and the knowledge that goes with that privilege. The compounding effect of these requirements is that Indigenous people begin to essentialize the Indigenous identity (Hokowhitu, 2013). These rigid requirements for identity also ignore the expanded range of identities available to individuals as a result of the Internet and new community formats such as those found in urban centres and at Aboriginal friendship centres. If we continue down this path, the messaging of essentialist identity measures could risk traumatizing an already traumatized population and endanger the next generation and their own personalized connection to the Indigenous community.

Bonita Lawrence (2004) explores the complexities of the urban experience in her research on Indigenous identity. Participants in her research discuss the difficulties in claiming their Indigenous identity or “Nativeness”, particularly for those that are “white-looking” (p.135). These participants feel they need to battle against ideas of inauthenticity, both from non-Native people as well as other Native people while negotiating their own feelings of being outsiders and risking accusations of appropriation. They went on to discuss how these feelings challenge their own self-worth and often revealed “complex and contradictory ties to both Nativeness and whiteness” (p. 149, emphasis in original). These complexities and contradictions demonstrate the impacts of years of colonial policies and generations of displacement, resulting in Indigenous people in urban spaces struggling to define and understand their own identities.

A handful of the participants insist on more complex notions of what constitutes Nativeness and understand their Native identities as being hybrid. These individuals, of multiracial and mixed cultural identities, consider themselves to be Native, but find that they have to step back at times from the relatively narrow views of Native identity that are common in the urban community, in order to be able to define themselves more
fluidly- in a sense, more accurately- than in dualistic ways. For the remaining
participants, however, the only way to manage the contradictions of having a mixed-race
identity- something in between the rigid poles of “Indian” and “white”- has been to force
their lives into the categories available and to use brutal clarity, silence, denial and humor
to deal with the ways in which they do not fit into these categories (p. 150-151)

These struggles and coping mechanisms required to negotiate Indigenous identity in urban
spaces further challenges simplistic measures of land first or language fluency as primary
markers of identity because Indigenous identity is both rigidly defined by legislation and ever-
evolving in experience suggesting are more realistic measure is multilayered, complex, and
sometimes conflicting.

Little research exists on Indigenous youth and their expressions of identity through digital
technologies. This is in part due to the historical relationships between researchers and
Indigenous people, but also likely because of the exponential increase of technologies available.
Additionally, ethical considerations for universities and, increasingly, First Nations band offices,
often mean further limitations for potential research opportunities. The literature that does
explore Indigenous youth and identity often supports, or at the very least, does nothing to
challenge the essentialist assumptions applied to Indigenous identity binaries (Hokowhitu, 2013).
Some linguistic scholars are calling for recognition of the multiplicity that exists in Indigenous
youth identities, and they note that this multiplicity is often expressed via technology in online
communities that were previously viewed as a component separate from face-to-face experience
(Wyman, McCarty, & Nicholas, 2014; Lee, 2014). This assumption that the digital world is
somehow less ‘real’ than in-person encounters should be reconsidered in order to resist falling
into binary thinking such as traditional/modern or authentic/inauthentic; the reality experienced by youth is what they express, and we must recognize this (Hokowhitu, 2013).

Acknowledging the possibility of a reality that exists in a different way than our own speaks to the traditional teachings that I have been given on multiplicity. I was taught that we can only speak with authority on that which we experience. Because of this, one cannot be sure of what others have experienced unless they choose to share their own experience and interpretation, so research that gives voice to Indigenous youth expressions of identity in digital realities seems like a natural extension of this teaching. This interpretation is supported by Baloy’s (2011) call to scholars to determine the linguistic ideologies of urban Indigenous youth by engaging youth and asking them how they connect their identities to their experiences learning language. McCarty et al. (2018) utilize storywork as a “theory and guide for praxis”, stating that narrative accounts presented in the research are “stories as empirically grounded cultural resources for recovering and sustaining Indigenous knowledges and identities” (p.161). The stories are explanatory as they are; providing the appropriate information within what is shared. This praxis would then empower youth participating in a similar research design and they can share their own linguistic choices, needs, and desires and truly become the “youngest policy makers” in a rapidly changing environment (Wyman, McCarty, & Nicholas, 2014, p. 17).

Examples such as this also speak to the choice of the cultural interface as the theoretical framework for this research as,

it is a space of many shifting and complex intersections between different people with different histories, experiences, languages, agendas, aspirations and responses… it is also a space that abounds with contradictions, ambiguities, conflict and contestation of meanings that emerge from these various shifting intersections. (Nakata, 2007; p. 199)
The work of McCarty et al (2018) that engages personal and communal stories as narratives which are explanatory in themselves creates a space for research that both allows and encourages people to share their experiences as a human and describe the intersections of positionalities that exist in their lived realities. Odango’s (2015) call for researchers to carefully examine their own assumptions of positionalities of another person by instead allowing the individual to confirm or challenge that assertion of identity. As Oliver and Nguyen (2017) demonstrate, Aboriginal youth act as agents, making their identity visible, or not, by deliberately choosing what to reveal—even in virtual spaces such as Facebook. They conclude by reminding readers of the importance of “establish[ing] and maintain[ing] personal and cultural identities, which have significant consequences for enhancing psychological well-being and self-esteem and are key elements for successful academic achievement” (p.481).

Archibald (2008) refers to the teaching of ‘all my relations’ and the explanation offered by Cherokee scholar and writer Thomas King. Our teaching is a reminder of relationships with family and friends, and the extended relationships with all humans. Key to Indigenous teachings about familial relations is that “relationships that Native people see go further, the web of kinship extend[s] to the animals, to the birds, to the plants, to all the animate and inanimate forms that can be seen or imagined” (p.42). This value extension of relations beyond family, beyond human, already include multiple layers and explaining one’s positioning is a stated recognition and act of connecting to these relationships. Identity formation, development, and identification is thus a personal exercise in agency that exists in Indigenous community already, but that can sometimes be overlooked in digital spaces, or new formats. The complexities of defining a community with such diversity is difficult, however I suggest that drawing on aspects of our traditional teachings such as ‘All my relations’ and some theories within SLA such as
superdiversity, offer an opportunity to explore new ways to engage with discussions on the intersections of language learning, cultural transmission, and identity determinations. Wilson (2008) states that part of the teaching of ‘All my relations’ is about acknowledging those who have gone before you and carried teachings throughout their lives to transfer them to younger generations. Further, ‘All my relations’ also encompasses the awareness that those relations yet to be born will, in turn, be impacted by choices made today. This research is both an enactment of this teaching and a deliberate act of formalizing a space for participants to share their connections to relations, discuss how they see themselves connected to community, specify which tools they use to connect, and highlight how that influences the way they conduct themselves in their lived realities.

2.4 Technology as a Space/Place of Connection

Technology offers a multitude of ways to connect via posts, audio clips, and even video calling. Social media networking sites provide hubs for building and maintaining relationships which are often free, easily accessible by most mobile devices, and increasing in popularity with youth (Pew Research Center, 2018). Almost 20 years ago, Christie (2001) considered the potential of websites with interactive forums to provide a space for Indigenous people to gather and express themselves utilizing whichever media suits the purpose, and without geographical restrictions. He also acknowledges the inherent benefit in developing the digital skills and literacy of Indigenous communities. Technology can help revitalize Indigenous languages, assist in developing healthy identity, and provide cultural connections for community members. Insisting upon Indigenous identity constructs that require land access denies the urban Indigenous population living away from their territories the right to consider themselves Indigenous. Although some reserves exist within metropolitan boundaries, colonial policies still
govern the land and many of the spaces are considered reserve land in title but remain unoccupied by houses. Therefore, technology such as social media (SM), while not land-based, can offer that first step to connecting with community or maintain a sense of engagement when physically absent.

Deumert (2014) confirms, “digital practices… are essentially open and it is up to [Internet post] writers how they wish to interact” (p. 119). Thorne, Sauro, and Smith (2015) note that “social media networks enable historically stable as well as emergent and hybrid forms of communicative practice to propagate” (p. 215), and this is particularly true of the ways in which Indigenous people are utilizing Facebook and other social media to access the expanding offerings of language learning apps available on multiple operating systems. Although digitized language learning has occurred in numerous languages on the planet for many years, this is a relatively new phenomenon in Indigenous communities, with the majority of apps being developed in the past decade. The new emergence of apps and language communities online provide the evidence needed to demonstrate an interest in further development and expansion of language resources.

Scholars such as Oliver and Nguyen (2017), Romero (2015), Cru (2015), and Kral (2011) are demonstrating that Indigenous youth are utilizing social media sites such as Facebook and Twitter to engage with their Indigenous identities and use Indigenous languages. Although not specific to Indigenous youth, the Pew Research Center (2018) states that 95% of youth 13-17 years old in the United States has a smartphone. Further, between 2014-15 and 2018, the popularity of social media sites shifted drastically from Facebook to newer platforms such as Instagram and Snapchat. Francis and Liew (2009) consider digitized knowledge to be a new form of the cultural interface proposed by Nakata (2007), largely due to the user-driven model of
website and app creation. These digital spaces provide an opportunity for Indigenous communities to determine their own priorities in creating an online presence and filling it with knowledge they deem important, however, Francis and Liew also remind us to consider that intellectual property protections are defined by and enforced within Euro-western knowledge systems and may be at odds with Indigenous ways of knowing. Romero (2015) goes further to caution how large corporations that control social media sites may interfere with traditional forms of protection and notions of communal ownership.

Some of the strengths offered by digital spaces of engagement are highlighted by Chapelle (2009), who suggested that students may feel more comfortable making mistakes via technology vs. face to face as it reduces the feelings of embarrassment or shame. Some communities and teachings discourage the arrogance of showing off that you know the answer—however technology allows for the opportunity to participate freely without judgement or assumptions of grandeur. Although often based on English as a Second Language or English as a foreign language, research consistently demonstrates higher levels of engagement in online environments, and notes a more flexible, shared role of teacher/student within these spaces (Thorne, Black, & Sykes, 2009). Learners in these spaces share their wisdom with other learners more readily and further solidify their own learning through translation into teaching.

Non-Indigenous academics such as Smythe, Toohey, and Dagenais (2014) use two case studies of production pedagogies to demonstrates how tools such as videomaking apps on an iPad can develop multiliteracies in learners. Their work with English language learners in an urban school setting, and with adult upgrading students, provides two examples for how utilizing non-traditional tools in a learning environment can stimulate development of language skills and technological capabilities, in addition to other skills such as leadership, collaboration, and
creativity. This type of holistic learning that occurred through the production pedagogies is similar to the pedagogical style of Indigenous cultures in that each aspect of the learner is nurtured, while allowing the natural skills of each individual to shine. Though the study is based on non-Indigenous learners, the positive outcomes further reinforces the work of scholars such as Galla (2010, 2016) and Carew et al. (2015) who demonstrate the opportunities technology offers for Indigenous pedagogies and revitalization strategies. Both Carew et al. (2015) and Odango (2015) explicitly call for further incorporation of multimedia tools and technology into Indigenous language learning because of its effectiveness, and appeal to youth.

Galla’s (2016) survey of Indigenous technology users indicates that “digital technology has created new domains for languages to exist, allowing learners and speakers to engage in or at least feel the language is a necessary part of their Indigenous well-being and the contemporary world” (p. 1143). Noori (2011) spoke strongly of this idea that Indigenous language needs to be “visible in order for it to become speakable” (p. 6), and this includes placing the language in spaces where the youth are. Although her work focuses exclusively on Anishinaabemowin (Anishinaabe language), her words serve as a call to the Indigenous community at large: “If our children type, text, process their English words, and place them in a wireless web environment, then we must do the same with Anishinaabemowin” (p. 6).

Oliver and Nguyen (2017) discuss Aboriginal Australian youth and young adults using Facebook as,

a virtual space in which to express themselves, to share their identities, and to communicate with others, both Aboriginal and non-Aboriginal. Moreover, this virtual space appeared to facilitate their unconstrained experimentation with language and
liberated their multilingual identity; that is, it offered them opportunities, which they
exploited for translanguaging processes. (p. 471)

This supports Chapelle’s (2009) assertion that youth/learners feel more comfortable online, as
well as indicates that youth express identity in digital spaces freely. The researchers connected to
the idea that the writers were posting words, ideas, and thoughts tailored to their imagined
community of readers, much as Norton (2013) suggests that language speakers identify with the
community of the language they are learning. Considering the age-old question of a tree falling
in a forest with no one to hear it, one could also ask is a story being told if no one hears it?
Whether or not the posts in digital spaces are in fact read by anyone at all, it is important to
acknowledge youth are utilizing these spaces in this way whether adults, other community
members, or Elders are there to read it, or not.

2.5 Indigenous Knowledge Online

One of the challenges of bringing Indigenous language and culture to virtual spaces is
considering what this means for Indigenous Knowledge (IK) and cultural protocols, given the
importance of cultural specificity and the subsequent issues that can arise when intellectual
property or copyright laws are at odds with Indigenous priorities. For the purposes of this
discussion, IK includes things like language, philosophy, cultural practices, worldview, history,
and environmental knowledge. This is by no means an exhaustive list of what IK is, rather it
contextualizes the benefits and complexities considered within this dissertation. Further, I refer
to Nakata, Hamacher, Warren, Byrne, Pagnucco, Harley, Venugopal, Thorpe, Neville, and Bolt
(2014) in acknowledging the various levels of IK such as public (open access), semi-restricted
(requiring permission), and highly restricted (sacred knowledge) (p. 101). The IK discussed in
this study, largely language and general protocols for community members, falls largely within the public area, with semi-restricted or sacred knowledge being specified as required.

The proliferation of apps, social media platforms, and websites on the Internet make enforcing rules and protections around IK particularly difficult. As technology continues to advance, new rules and guidelines need to be developed, while at the same time, communities must decide how to address the lack of applicability of cultural protocols in this intersection of technology, intellectual property, and the globalized (often commercialized) space of the Internet. Christen (2012) suggests a cautionary approach when considering what information should be freely available, and at what cost to the community in which the knowledge originated. Again, I reiterate that my suggestion of adapting protocols or elements of Indigenous knowledge (such as specific words, or a cursory introduction to a ceremony) does not mean changing existing protocol or going against it, but rather an exploration of how we can adapt the intentions of protocol to protect sacred knowledge in a way that offers a connection to those seeking it, such as Indigenous youth.

Brown and Nicholas (2012) created a useful graph for determining whether information is offensive or inappropriate as it relates to Indigenous people. However, the use of such a guideline would be both contextual, and completely voluntary and seems to offer more benefit to non-Indigenous people working with IK, rather than as something beneficial for Indigenous communities because it is designed for considering trademarks that utilize any aspect of Māori knowledge and is rather general. They also posit that true repatriation for knowledge shared online is impossible, a caution worth considering if Indigenous communities are looking to share their knowledge or language teachings online. Goode (2010) explores the complications of
sharing IK online and offers examples of some of the negative ways in which racism and misappropriation of IK are expressed online.

There are also many benefits online spaces offer for sharing Indigenous knowledge. Cushman (2013) discusses the digital archive for the Cherokee Nation and its use of stories as a means of embodying the “pedagogical and intergenerational understandings” (p. 128) of IK, even though it is presented in a digital, online format. She further suggests digitized IK offers three gifts; “integration, customization, and accessibility” (p. 130). Doering and Henrickson (2014) agree with this position and consider how IK shared online allows for more applicability and adaptability than standard teaching methods for language instruction. Odango (2015) reminds us that youth perspectives are not often represented in academic discourse, but they are frequent and enthusiastic participants with technology. The survey respondents in Galla’s (2016) work also demonstrates enthusiasm from both youth and older community members to use whatever tools are available to preserve and revitalize Indigenous languages. She also offers the reminder that any work in this area should be done in collaboration with technology users such as youth, as well as cultural knowledge holders to ensure the desires of the communities are being addressed in any initiatives undertaken. This would also ensure that the knowledge shared in public or semi-public forums is appropriate and protects the privileged knowledge and practices of Indigenous communities. The principles of Ownership, Control, Access, and Possession, or OCAP as they are commonly known, were created to create a framework for self-governance for First Nations throughout the research process (National Aboriginal Health Organization, 2007). These principles create a strong foundation for protecting IK online but were created specifically for an academic research process, before social media was a
predominant form of communication, and prior to the ubiquity of open-access knowledge in online spaces.

Wemigwans (2016) offers a solution to sharing IK online with the success of doing so in a way that centres and honours traditional protocols. In her dissertation she suggests that online [I]ndigenous knowledge projects can be considered as ‘digital bundles’, and that by doing so, it elevates the cultural protocol and cultural responsibilities that come with such a designation. In addition, the notion of a digital bundle grounds online [I]ndigenous knowledge projects within an [I]ndigenous epistemological paradigm. (p. ii)

Much as protocols around the use of photography around ceremony and other areas of IK developed as needed, and expanded to consider cell phones and social media, it is possible to see how protocols can be adapted and negotiated as appropriate for communities, ceremonies, and teachings. While some may see this as a limitation, I suggest it simply speaks to the teaching of reverence and ensuring that sacred knowledge remains as such—while also creating opportunities to engage with tools that are helpful and appealing to younger generations. Wemigwans (2018) published a book on the concept of the digital bundle, further stating that the “book demonstrates how Indigenous Knowledge online contributes in significant ways to the movement of Indigenous resurgence and thereby represents a new social movement, a new Internet activism propelled and shaped by Indigenous perspectives and values” (p. 7).

The call from Noori (2011) to meet youth wherever they are, even if that is in digital spaces can be the first step that then leads to a discussion on protocols and appropriate knowledge and processes for placing IK online—whether in a digital bundle as suggested by Wemigwans (2016), or in another form that makes sense to the specific community. Discussions with many members of the community brings in many individuals with varying levels and areas
of expertise and also helps build relationships so youth can remain connected to the culture and supports that will help them develop a good life.

Nakata et al. (2014) offer explicit motivation for placing IK in online spaces with thoughtful collaboration stating:

[T]he need for Indigenous [K]nowledge among urban and dislocated Indigenous communities engages different historical and contemporary conditions, and features a periocular desire to re-connect with their knowledge traditions… [t]herefore, it is critically important to utilise technologies with appropriate capabilities to manage the circulation of Indigenous [K]nowledge in a culturally sensitive manner, and to ensure Indigenous people’s on-going engagement with their knowledge traditions (p. 102, emphasis in original).

Complexities around access to land, education, and even cultural practice continue to impact identity development and maintenance for Indigenous people in myriad ways. Careful and thoughtful consideration to how and what IK is shared online, and which protocols are followed to do so, offers an opportunity to engage with displaced and disconnected Indigenous community members.

2.6 Chapter Summary

Although this discussion of literature is extensive, it is important to clarify here that what is highlighted above represents small pieces of many aspects of academic discourse in a wide variety of subject areas. This dissertation is an expression of the plurality of Indigenous existence and it touches on many different areas, drawing on the work of a wide variety of scholars, but sits firmly in territory that has not been previously explored. Utilizing storywork to centre Indigenous youth voices in academic conversations on ILR, youth identity, and the various forms
of digital engagement is supported by a thorough examination of the literature that clearly demonstrates while the literature offers many important theories and contributions, the stories shared by participants in this study highlight that there remains much work to be done.
Chapter 3: Listening to Relatives (Research Methodology)

This chapter describes the research methodology for this study. The first section outlines Indigenous methodologies, highlighting why storywork (Archibald, 2008) is combined with Anishinaabe ways of knowing as the methodology for this study. Next, select examples of youth-centered research that gives voice to Indigenous youth demonstrates how my work contributes to this area by combining Indigenous methodology and youth research. I further extend the discussion into my incorporation of spirit and ceremony within the context of this research project. The knowledge gathering (Hare, 2001) section provides the details of the study including participants, site, ethics, and the methods utilized. Finally, the meaning making section details the analysis portion of this research.

3.1 Indigenous Methodologies

Indigenous research methodologies do not simply model other qualitative research methods, rather they “denaturalize” and “expose colonial power” (Morgenson, 2012, p. 805) in a manner that contrasts research methods of the past, while anticipating the end of colonial power. Indigenous methodologies do not exist to claim Indigenous knowledge as legitimate, rather they exist because Indigenous knowledge does not need to be claimed as legitimate; it simply is. Indigenous research methodologies act as a form of resistance against the colonial structures that still determine identity, community definitions, government interactions, and familial ties (Battiste, 1998; Morgensen, 2012; Smith, 1999). Battiste (1998) considers the effect of cognitive imperialism; the prioritizing and legitimizing of one belief system over others through the process of public education. This concept was best expressed in the structure and system of residential schooling in Canada, but it could be argued that it is also present through the systemic prioritization of positivistic, scientific, ‘evidence-based’ research over other research paradigms.
Delegitimizing other forms of research is another form of cognitive imperialism that served to benefit the Euro-Western researchers and maintain institutional and academic superiority over the ‘other’. Drawing on Wilson’s (2008) definition of Indigenous methodology as a process to express our realities through our own epistemologies, the importance of utilizing an Indigenous methodology in Indigenous research is the centering and legitimizing our own voices in research and academia more broadly. The decision to draw on Anishinaabe teachings (Benton-Banai, 1988; Gross, 2014) and the work of other Indigenous scholars in this research is based on the need for decolonizing methodologies, although it was less an active decision and simply my way of being in the world or living minobimaadziwin (living in a good way).

Kovach (2009) writes of Indigenous methodologies as a circular, holistic, research process. She narrows her statement on the uniqueness of Indigenous methodologies to “Indigenous methodologies are guided by tribal epistemologies, and tribal knowledge is not Western Knowledge” (p. 30). This also explains how Indigenous methodologies remain bound by similarities yet remain diverse and distinct; each researcher draws on her or his tribal or nation knowledge base. This also further explains why Indigenous methodologies are unique from both mainstream paradigms, as well as other methodologies favoured by critical scholars and other marginalized populations such as participatory action research and critical ethnography. Kovach considers a statement of positionality as critical because it connects the unique tribal epistemology the researcher plans to draw on through placing them in the centre of their relationality to the knowledge. She notes that researchers utilizing Indigenous methodologies will introduce themselves in a way that is very similar to how one would introduce themselves in the community; by placing themselves in relation to others in their community. Furthermore, one of the most critical points Kovach argues is that Indigenous
methodologies challenge not only the concept of acceptable research, but also what constitutes acceptable knowledge (p. 78). By challenging academic expectations in this manner, Indigenous people are then able to (re)claim the respect and authenticity from academia that was denied through traditional research methodologies and academic expectations. 

This is the reality that Indigenous scholars utilizing Indigenous methodologies operate within, and so traditional teachings on epistemologies, axiologies, even relationships are incorporated throughout these methodologies. These teachings are the foundations of the need for the research, as well as the way in which the research is conducted. Indigenous teachings state that one can only speak with authority on your own experience, from your own perspective (Gross, 2014). There is respect for multiple truths and incorporation of differing opinion, in contrast to traditional research and positivistic thought wherein there is only one truth. This is one reason why Indigenous researchers position themselves and share their bias with the reader; it is a form of humility and acknowledgement of our teachings on the multiplicity of truth. This acceptance and encouragement for many truths also creates an incredibly diverse paradigm, making it hard to define an Indigenous methodology, however there are the common threads of the teachings that exist within the paradigm. Indigenous people and communities have needs that are often very different from those of mainstream society, and this is partly due to the colonial history, and partly because of the teachings. Encouraging scholars to incorporate these teachings into their research ensures that Indigenous knowledge and thought will be respectfully and accurately represented in academia.

3.1.1 Storywork Methodology

I chose to emphasize an Indigenous methodological approach to my study. In doing so, I am following the pathway of Indigenous scholars such as Smith (1999), Kovach (2009), Wilson
(2008), Archibald (2008). These are the Elders in the academic sphere where I see my work best situated. Kovach stresses the importance of situating ourselves as Indigenous academics within our own understandings of the world and within the work achieved by others. I could not do this work following any other pathway or epistemology because it would force me to rely on western perspectives for academia and research; whereas the only way I felt prepared, supported, and ready to conduct this research was as a result of my cultural teachings and preparations as a leader in the community. I also had no intention of being critical of the stories shared with me by participants- being honoured to hear the personal experience of someone is a responsibility and I treated the entire process from conception to delivery to meaning making with reverence (Archibald, 2008). Approaching the stories from a critical place or even seeking to determine a right or wrong aspect is contrary to both my traditional teachings and the intentions of this study-to have youth voices represented accurately and available in decisions that influence design and implementation of policies and programs that are directed at youth. McCarty et al. (2018) speak of storywork and explain “we equate voice with agency; as storywork that follows illuminates, this is not simply an intellectual experience of identity... but an embodied experience of personal belonging and responsibility” (p. 161). Storywork principles were a short reach from my understanding and capability- they align closely with the seven grandfather teachings of honesty, truth, humility, love, wisdom, courage, respect (Benton- Benai, 1988). Understanding what Wilson and Kovach were describing within their text offerings was closer to my vision of what this research should be and as such I designed my research trusting my own vision and the teachings and guided by Indigenous scholars who have forged the path for culturally-relevant and-grounded ways of gathering knowledge, as Kovach and others encourage Indigenous researchers to do.
Archibald’s (2008) methodology of storywork is an exemplary decolonizing methodology. Seven principles are specific to her methodology of storywork, which is a process of utilizing stories from research participants and community knowledge keepers to conduct and interpret research. She considers storywork to be a beginning theory for developing a research process and clearly states these principles are based on her Sto:lo teachings. These principles closely align to other Indigenous methodologies and varying traditional teachings of Indigenous communities, including my own. Archibald’s seven principles are; Respect, Responsibility, Reverence, Reciprocity, Holism, Interrelatedness, and Synergy. The traditional teachings given to me by my Elders have greatly influenced my understanding of these storywork principles as they closely align with the seven grandfather teachings of honesty, truth, humility, love, wisdom, courage, and respect (Benton-Banai, 1988) and resulted in my desire to use storywork as the methodology for this research. I have elected to use the storywork principles instead of the seven grandfather teachings to guide my research process because I find the connection to research clearer with Archibald’s principles, although there are elements of the sacred teachings within all of the storywork principles. For example, the explicit overlap of respect as principles in both guided my interaction with participants and the stories that they shared with me.

When considering the central question of this doctoral research; how does technology influence language and cultural learning and urban Indigenous identity development? I felt it important to remember my intention to honour the youth participants and their voices. This intention served as motivation to consider sub-questions about forms of technology youth use, how technology is impacting identity, and contributions of technology to learning as guiding points for discussion rather than prescriptive questions that required clear responses as a result of researcher prompting. I further relied on McCarty et al. (2018) to remember that “experiential
narratives… constitute epistemic, theoretical, pedagogical, and methodological lenses through which we can both study and practice language reclamation” (p. 147). I see this statement as relevant to cultural reclamation and identity development as well, particularly within this study as they further explain that “storywork provides data in the form of firsthand accounts through which to gain insight into the meaning” (p. 147, emphasis in original) of the reclamation activities. I purposefully use the term reclamation given the work of scholars such as Leonard (2017) who positions reclamation as an entire paradigm that incorporates Indigenous epistemologies, whereas language revitalization often focuses in on direct language measures such as creating more fluent speakers. This work also represents an important shift in methodological practice. The use of storywork as a means to acknowledge both the oral narrative history of Indigenous communities and empower participants working through their own experiences in spaces of intersectionalities is an example of Indigenous methodology serving as theory and praxis, which this doctoral research further builds upon by combining Indigenous methodology, centering Indigenous youth voice, and privileging Anishinaabe cultural practice.

My interpretation of storywork and the way I implement it in the research was undeniably influenced by the Anishinaabe teachings and epistemology where I locate my understanding of the world. I have utilized the work of Lawrence Gross (2014) in many places as he is also Anishinaabe and has written extensively on the topic of Anishinaabe ways of knowing. Gross (2014) has also helped to guide my thinking around protecting Indigenous knowledge and communicating clearly the context and my understanding and intent of the research process. Inspired by the Indigenous research framework proposed by Kovach (2009), I privilege my own Anishinaabe tribal knowledge at the centre of my research framework, exemplified by incorporating Anishinaabe practices throughout the research study, and by selecting
methodological choices for data collection via an interpretation of storywork (Archibald, 2008), and to use the study as a way to contribute to the Indigenous community and center Indigenous youth voices. Further, I have continued my spiritual journey in parallel to this research process. I make traditional offerings of tobacco at the outset of each stage of the research and continue to smudge and participate in other ceremonies throughout this research process. My spiritual growth and academic development are woven together, and I bring my teachings into the research as a means of acknowledging both the reverence and ethical considerations of this entire journey.

3.1.2 Youth Centered Research

Though there is a growing amount of research on Indigenous education, particularly research utilizing Indigenous methodologies, research with Indigenous youth is scarce. Indigenous methodologies that include Indigenous youth spread across the educational research spectrum, however, there remains very limited research with Indigenous methodologies and youth in the area of language revitalization. Further, youth-centered research utilizing Indigenous methodologies within the areas of identity development, cultural engagement and revitalization, and use of technology is also underdeveloped. It is important to note that there is a growing field of research with Indigenous youth and their traditional languages, however the majority of the language-specific research is written within the critical ethnography paradigm and seems oriented to the educational researcher, specifically those in the second language acquisition (SLA) field. One specific example from this trend is Indigenous Youth and Multilingualism (McCarty et al, 2014). This work critically centres young people as “the central stakeholders” (p. xv, emphasis in original) in language revitalization work and uses critical ethnography as the epistemological and methodological approach. While this collection of research begins to
address a gap in second language literature, I suggest further work is needed in the area that centres Indigenous epistemologies and methodologies.

Though the area of research with youth as the research agents in language is urgently needed, placing Indigenous epistemologies at the centre of the research is often missing from this work. There are examples of research that draws on Indigenous methodologies and centers youth voices beyond language and culture revitalization that are important to acknowledge here. Wolf (2011) follows Indigenous youth at an urban school in the United States and explores their use of the concept of warriorship. Though this study was conducted in an anthropological critical ethnographic style, the conversations with participants were designed in a way that honours both Indigenous storytelling tradition and the agency of youth. Parent (2013) demonstrates respectful, ongoing engagement of Indigenous youth and other participants during the doctoral research process. She explicitly states her methodology is an Indigenous one, and further clarifies that her research design was influenced by Kirkness and Barnhardt’s (1991) four Rs, with an additional ‘R’ added by Parent to represent relationships. Parent (2013) also draws heavily on the work of Archibald’s (2008) Storywork and Kovach’s (2009) Indigenous Methodologies. Parent’s engagement with participants and the community go far beyond the research project as she also wrote a secondary document to share with community to ensure accessibility for all that wanted to have copies of final work, and then presented to her home community at their request demonstrating reciprocity, respect, and holism.

Hare and Pidgeon (2011) conducted research with 39 First Nations youth on-reserve in Ontario about their experiences in the public education system. They “drew on Anishinaabe protocol to guide [them] in conducting the research” (p. 98) and connected this to Smith’s (1999) principles of ethical, respectful, and useful research for the community involved. The youth
involved in this research engaged with the Indigenous metaphor of the “new warrior” as something positive to express their cultural identity. They use this expression of a “new warrior” as a means to deal with the racism experienced within their schooling, and as a way to communicate cultural and linguistic pride that they draw on through their family and community supports. The youth were asked “open-ended questions” (p. 98) about their schooling experiences and the discussions were then recorded. Participants were given copies of their narratives to ensure validity, and the researchers also shared their findings and analysis with the community members and leadership, as well as provided everyone with a final report. This process of ongoing connection with the participants, as well as meaningful sharing of information clearly connects with the Indigenous methodologies described by Smith (1999), Kovach (2009), Wilson (2008), and Brown and Strega (2005), as well as the principles by Archibald (2008) outlined earlier.

Odango (2015) demonstrated an important shift in language research as he attempts to shift the discussion away from ‘about youth’ to ‘with youth’; much like Indigenous methodological scholars began to do in the decolonizing work of the late 90s and early 2000s. He considers this work to be a challenge to the “overwhelmingly older generation-dominated perspective in the academic discourse on language shift and endangerment” (p. 47). This work draws on his own Filipino diaspora to consider the implications of creating entire policies and programs for languages meant to serve youth, without ever including them in the research, planning, or delivery process. He also importantly draws on the idea that although the perspective of a young Indigenous language learner, or young Indigenous researcher may not be different than an older researcher, the possibility should exist for the research to either confirm or challenge that perspective. As Odango takes up the position of an advocate for the
underrepresented voices of youth in language research, he considers the holistic aspect of the life journey and calls for its inclusion in the academia through young, speaker-members conducting research and (re)centering Indigenous youth priorities and realities into language learning and revitalization efforts.

3.1.3 Spirit and Ceremony in Research

Drawing on the work of Wilson (2009) and the concept of research as ceremony, I extend this thinking to create my methodology of storywork (Archibald, 2008) enhanced. As stated in the positionality section at the beginning of this dissertation, I see myself as walking in two worlds. This is both a metaphor for my Indigeneity and non-Indigenous identity, but also my work as scholar and community member. I extend the methodology of storywork to better capture my understanding of the importance of centering Indigenous youth voice by incorporating Indigenous ceremony and spirit through practices such as smudging during the research process with participants, and offerings to the spirits and ancestors that have guided me throughout my life and during this process. I see this practice of drawing on teachings such as the grandfather teachings (Benton-Banai, 1988), considering Anishinaabe principles of being a good relative (Gross, 2014), and approaching research as a ceremony unto itself (Wilson, 2009) as a process that further demonstrates the importance of engaging Indigenous youth voice and prioritizing a holistic process whereby both participants and researcher are engaged as learners and teachers. This reciprocal act draws on the storywork principles but is rooted in my understanding of the importance of minobimaadziwin (living in a good way). While not all researchers will find it necessary to engage with ceremony or spirit in their work, I consider the inclusion an act of resurgence and decolonization that prioritizes Indigenous ways of knowing and being in the world.
3.2 Knowledge Gathering

The purpose of this research is to address explores how technology influences language and cultural learning and urban Indigenous youth identity development, prioritize youth voices, and contribute to various fields of scholarship including Indigenous language revitalization (ILR), technology-based learning, and urban Indigenous identity. What follows is an overview of the knowledge gathering (Hare, 2001) or data collection process which includes; participants, site of research, methods, and ethics. Over the course of two weeks in May 2018, three methods were utilized within this research: sharing circles, one-on-one conversations, and field notes. Each method is described in detail to demonstrate the rationale for utilizing each approach as means to address the central research question.

<table>
<thead>
<tr>
<th>Method</th>
<th>Name</th>
<th>Age</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing Circle 1</td>
<td>Bine (partridge)</td>
<td>24</td>
<td>2.5 hours</td>
</tr>
<tr>
<td>Sharing Circle 1</td>
<td>Zhiishiib (duck)</td>
<td>24</td>
<td>2.5 hours</td>
</tr>
<tr>
<td>Sharing Circle 2</td>
<td>Meme (woodpecker)</td>
<td>31</td>
<td>2 hours</td>
</tr>
<tr>
<td>Sharing Circle 2</td>
<td>Nika (goose)</td>
<td>21</td>
<td>2 hours</td>
</tr>
<tr>
<td>Sharing Circle 2</td>
<td>Waabizii (swan)</td>
<td>25</td>
<td>2 hours</td>
</tr>
<tr>
<td>Conversation</td>
<td>Beshkwe (nighthawk)</td>
<td>32</td>
<td>1.25 hours</td>
</tr>
<tr>
<td>Conversation</td>
<td>Gwiingwiishi (grey jay)</td>
<td>22</td>
<td>50 minutes</td>
</tr>
<tr>
<td>Conversation</td>
<td>Diindiisi (blue jay)</td>
<td>24</td>
<td>45 minutes</td>
</tr>
<tr>
<td>Conversation</td>
<td>Aandeg (crow)</td>
<td>35</td>
<td>56 minutes</td>
</tr>
<tr>
<td>Conversation</td>
<td>Apichi (robin)</td>
<td>29</td>
<td>45 minutes</td>
</tr>
</tbody>
</table>

Figure 3-1 Knowledge gathering summary
3.2.1 Participant Selection

I sought to engage a total of 20-30 Indigenous youth, aged 18-35 that reside in the Greater Vancouver area to take part in a one-day workshop at the First Nations House of Learning at the University of British Columbia. I utilized the extended age range of youth up to 35 years old as specified in the Canadian Census because I wanted to engage the widest possible breadth of youth experience including those that are still considered young adults. Youth recruited for this study self-identify as Indigenous (First Nation, Métis, and/or Inuit) and were already using, or were willing to start to use technology and social media for the purposes of language and cultural learning.

The focus on the urban area of Vancouver draws on the literature that indicates that the Indigenous youth population is largely located in urban centres, and that they have little access to fluent language speakers (Baloy, 2011; Statistics Canada, 2016). As a further consideration of the intersection of technology and its impact on youth identity and cultural and language engagement, urban centres offer better Internet services than on reserves, increasing the likelihood that the participants will be regularly engaging with technology and have reliable access to data-heavy uses such as language learning apps and social media sites (Galla, 2016). It is for this reason that an extension of this research be considered for Indigenous youth living on-reserve and/or in rural areas.

Cautious of urban/ non-urban, on/off reserve binary, I tried to consider intersections beyond traditional binaries (gender, age, geography, experience, sexuality, online identity) by considering movement between rural reserve(s) and urban spaces as flexible and often changing. For the purpose of this research, I invited Indigenous youth who live away from Indigenous community (urban, rural, or on-reserve) to participate. This would include those who grew up
and are now displaced (permanently or temporarily) as well as those who grew up away from the community for their whole lives (adopted out, parents lived away, or other reasons). As discussed at length in the literature review, identity is flexible and a complex creation of influences, sometimes temporary and other times permanent. I use the term intersectionality in the colloquial sense, to refer to the way in which multiple identity descriptors impact our experience and perception of the word. Avoiding a formalized definition of intersectionality further drew upon the notion of the cultural interface being a space of contested and sometimes conflicting experiences (Nakata, 2007).

Participants were recruited through poster advertisements at UBC, Vancouver Aboriginal Friendship Centre, and other urban Indigenous youth organizations, such as Urban Native Youth Association. I also promoted the recruitment process through digital means, including email list serves and my personal Twitter feed and other social media, encouraging others to share the invitation to the study within their own social media feeds.

3.2.2 Participants

Participants in this research were invited to share the aspects of their identity that they felt comfortable with, so long as it met the basic requirements of the recruitment definitions. They were not required to disclose any aspect of their identity and were assigned bird names in Anishinaabemowin (Anishinaabe language) following the conclusion of the knowledge gathering.

A total of ten participants contributed to this study. Five participated in sharing circles; two in the first sharing circle (Bine and Zhiishiib), and three in the second sharing circle (Meme, Nika, and Waabizii). Five participants had one-on-one conversations; Beshkwe during the first attempted sharing circle, and Gwiingwiishi, Diindiisi, Aandeg, and Apichi as scheduled.
conversations at their request. While this number is smaller than originally anticipated, another sharing circle was scheduled for the following week off campus, to address potential limits of attendees by location. No attendees showed up for this final attempt. In following the teachings I have received on conducting ceremony and given my consideration of this research as a type of ceremony, I trusted the process that the ones who are meant to show up will do so.

Amongst the ten participants, there was a wide variety of those who grew up with cultural teachings in their community and those who were raised without access to the teachings. Half of the participants identified as having grown up in urban spaces, but within that five, Meme was the only one to specify a connection to cultural teachings and ceremony. The other four indicated they came to learn about culture later in life, often as a result of their own efforts via technology. Of the remaining five participants, both Zhiishiib and Bine grew up in their respective communities with access to cultural teachings. Gwiingwiishi grew up in her traditional territory, but without connection to the culture. Waabizii grew up in a rural area that was not her traditional territory, nor did it offer connection to culture. Aandeg also grew up in a rural area, but specified he had some access to cultural knowledge. All of the participants now reside in the urban area of the Lower Mainland in British Columbia, with only Zhiishiib stating she is likely to move back to her community in the future. There were four participants whose territories are in the prairies (Meme, Waabizii, Nika, and Aandeg), two in central Canada (Beshkwe and Bine), and four in British Columbia (Apichi, Diindiisi, Gwiingwiishi, and Zhiishiib). Nika and Aandeg were the only two male participants. Given the relatively small number of participants, this is the extent of personal identifiers to be shared publicly.
3.2.3 Research Site

The research occurred in the traditional, ancestral, and unceded territory of the Musqueam people, at the UBC First Nations House of Learning in Vancouver, BC. This research site was selected because it was a low-cost space and allows for a ceremonial smudge. The site is also accessible by transit, culturally respectful, and offers a kitchen space that will ensure safe storage and serving of the food provided to participants.

3.2.4 Method One: Sharing Circles

3.2.4.1 Sharing Circle Rationale

There are some teachings that I have carried with me closely during the formation of this research design including the importance of autonomy, respecting the entirety of the life cycle, and the teaching of humility. The literature on Indigenous language revitalization (ILR) often privileges adult voices (Baloy, 2011; Odango, 2015; Wyman, McCarty, & Nicholas, 2014) so the focus on youth in this research intentionally redirects that attention and gives voice and agency to young Indigenous peoples through the use of sharing circles and one-on-one conversations. Lavallée (2009) describes her method of inquiry as “gathering stories through sharing circles” (p. 28). I too used sharing circles in this research as way to gather stories about how Indigenous youth are using technology to facilitate their language learning and the impact these tools and technologies have on their identity. Lavallée also conducted her research in an urban space, acknowledging the complexity of being respectful of many potentially similar, but still distinct cultural practices. The use of sharing circles ensured respectful protocol and sacred meaning to the process, even if the participants were from different nations.

Lavallée (2009) differentiates the sharing circle method from focus groups with sacredness. She states that sharing circles bond participants with protocol and create
transformative experiences that engage the whole self (mind, body, spirit, and emotion), whereas focus groups simply gather information on a topic from a group of participants directed by the researcher. As the researcher, I focused on treating the stories shared by participants with respect and reverence, and I approached the sharing circles in this process knowing that I too will be transformed in this process. This is also a demonstration of the commitment to conducting the research *minobimaadziwin* (in a good way).

In creating a research process using sharing circles with many participants, I am able to demonstrate teachings of collaboration and community through this sharing circle structure. This collaborative knowledge creation structure also creates opportunity for youth to build upon each other’s contributions in group conversations and create their own themes of importance instead of relying strictly on the researcher interpretations to create themes between participant contributions (Lavallée, 2009). The less formal structure than requiring direct responses one by one to prompting questions allows layered storying whereby participants build on each other’s stories and contributions, even if they do not respond directly to the research questions (A. Anderson, J. Anderson, Hare, & McTavish, 2015). Although this may seem counterintuitive to western researchers, this process encompasses the relationship building and transformative bonding to which Lavallée (2009) and Anderson et al. (2015) refer. In organizing the research this way, I also acknowledge that I do not know everything and consider the participants in the research to be the knowledge holders in this process.

### 3.2.4.2 Sharing Circle Process

Based on the storywork methodology of Archibald (2008) and informed by the teachings I have received on Anishinaabe sharing circle practice, I designed a research process where sharing circles with urban Indigenous youth were planned to be held at the First Nations Longhouse at
the University of British Columbia. Although many Indigenous nations also utilize sharing circles, the sharing circle design for this research was rooted in the teachings I have received as an Anishinaabekwe (Anishinaabe woman), which then shaped the organization, implementation, and interpretation of the sharing circle process. The knowledge gathering process relied on audio-recording the sharing circles, transcription of the data, in addition to researcher reflections (field notes).

The sharing circles were held in Sty-Wet-Tan Hall at the UBC First Nations Longhouse. Again, this location was something I had envisioned during the planning but struggled with as I debated the possibility of it being considered inconvenient for participants coming from off-campus. Nonetheless, the circles were held in the hall, and as I arrived for the first circle on a Sunday, I was overcome with the sense that this was exactly as things were meant to be. I felt a quiet sense of confidence for the first time in the entire Ph.D. process, but in that moment, I knew that I was doing what I was meant to, and in a good way. I looked around the hall and remembered all the profound moments that had come to be for me as a person and as an academic: I completed leadership training, made my first drum, and defended my capstone undergraduate project in that hall. I walked through the eastern doorway when I completed my B.A. with my family and friends watching over me. I knew that that place and space was exactly where and when the research was meant to happen.

That first day, I only had one person show up for the sharing circle. Although I was initially disappointed, I immediately thought of the teaching I had received recently about conducting ceremony; the people who are meant to show up will show up. So instead of a sharing circle, I had a conversation with Beshkwe using the questions as a guide for our discussion. I found our conversation incredibly informative and energizing. The reflections from
Beshkwe about the process I had conducted, including a smudge and a traditional tobacco offering, made her feel safe and supported empowered me to further trust the process I had envisioned. Although the sharing circle I had originally planned for turned into a one-on-one conversation, I took this change to be a part of the teaching of trusting the flow that the ceremony will occur as it meant to, and that I am truly a conduit and not the conductor.

Around this time, I had people who were not able to join one of the three planned sharing circles requesting if they could participate in another format. Based on the positive experience that I had with the Beshkwe, I suggested meeting during a time that worked for the participant to have a conversation that would be based on the research questions. This process will be further discussed in the next section.

The sharing circle process was guided by the Anishinaabe protocols I have learned and storywork principles. The circles did not use an item to designate the speaker such as a talking stick or significant cultural artefact, eagle feather, but respectful participation was enabled through my role as facilitator. The role of facilitator served to ensure that if multiple participants wish to speak, everyone could proceed in a way that respected all contributors. In preparation for this role, I also completed the TCPS 2 CORE course on ethical conduct for research involving humans and made offerings and asked for guidance from my Elders on conducting this work in a good way. I have participated in many talking and sharing circles throughout my life. Over the past few years I have gained confidence in holding circles of my own as I developed my role within the Indigenous ceremonial community. Conducting the research using a method that incorporated myself as researcher and ceremony was critically important to honour the original vision of this research. I consider all researchers invested in their work to some degree, so to honour that component I knew I had to sit in circle with my participants as both a form of
honouring what they decided to share with me, but also as physical demonstration of equality and positioning myself as a part of the process, not the owner or director. Although this physical placement of researcher within circle does not negate the power I hold as said researcher, it is a step in the direction of demonstrating humility and recognizing my own role as Indigenous language learner as one of the main motivators for pursuing this study.

Each of the small sharing circles began with a smudge, to open the circle with a good way and ensure that I had time to gather my thoughts, offer my prayers for a good circle, and to invite the ancestors to join in. I then continued with an offering of tobacco to each participant as this follows teachings I have received in acknowledging that you are asking for something and that you are prepared to honour what you are given in return. Although I struggled with the ethical dilemma as to whether I would get more participants if I offered a monetary honorarium, I felt that a traditional offering of tobacco and food would better reflect the reverence I have for the research process as a ceremony. I have been taught that to be a good host, one provides food, drink, and comfort for one’s guests and I did so as best as I could for my participants.

The process for both sharing circles was similar. Following the smudge, offering and accepting of tobacco, and the signing of ethics forms, we would begin the sharing process. I offered a copy of the research questions to each participant (Appendix A) and indicated this would guide our discussion but not limit it. I further clarified that each participant would be allowed to finish their thoughts without being limited to a certain time or risk being cut off if their contribution was seemingly unrelated to the topic at hand or addressed another question out-of-order. I explained this process in detail to the participants before formally starting the discussions. Once the process was explained and agreed upon, I would start the audio recording and work our way through the research questions. At the conclusion of the sharing amongst
participants, I would refer to the questions to see if anything required further clarification for my own understanding and offer another chance for participants to add on to their thoughts. If the next question had already been addressed, I would explain this to the participants and suggest we move on to the next unless someone wished to speak again on the topic. This opportunity to story upon what others had shared was a critical component of the rationale for selecting sharing circles as a method because of the diversity in perspective it offers and the opportunity to further unpack different points of view within one group (Anderson et al., 2015). Although the attendee numbers of the sharing circles were smaller than anticipated, I encouraged participants to speak up if they wanted to build upon something that was said by someone else. It was further confirmed that I had booked the space for entire day and we did not need to rush through our time together, but the circles concluded naturally once discussions wrapped up and the questions I had prepared were addressed. Sharing circle one took approximately 2.5 hours, and sharing circle two was approximately 2 hours.

I was very cognizant that my role in the research is to be a participant, but more as an active listener than contributor. Therefore, I relied on trusting the audio-recording of the circles to be the primary source of information and considered the purpose of the reflections to be a prompt for my own reflection during the analysis and writing process (Roulston, 2014). Notes were written in short form to capture ideas that could be further explored, or personal reflections to revisit later in the analysis portion of writing. Minimizing the frequency and detail of field notes reinforced my commitment to participate in the sharing circle as a full participant, not simply an impartial observer. I tried to ensure that I was writing down my post-circle reflections as well, but if I did not feel the urge to write I tried not to force it as it seemed incongruent to my thoughts on processing the feelings and experiences before reflecting deeply on them.
3.2.5 Method Two: Conversations

One-on-one conversations were the result of the sharing circles unfolding in unintended ways (Kovach, 2010). The use of one-on-one conversations (interviews) was originally proposed within the ethics application as a method to go further in depth with ideas and stories shared by participants in the circle process as needed, however, the circle process was much more efficient than anticipated and as a result, the participants were able to speak freely and without any time constraints. Therefore, conversations were utilized as a means to engage more participants and welcome the interested youth into the research process. After being approached two or three times to see if participants could just speak directly with me due to scheduling conflicts with the proposed circles, I decided to offer conversations as an alternative to any eligible participants unable to join the sharing circles.

As a result, I held five conversations with Beshkwe, Gwiingwiishi, Diindiisi, Aandeg, and Apichi. Conversations were also held in the UBC First Nations House of Learning, in one of the smaller rooms in the student study space to maximize recording quality and provide privacy for the process. The same research questions and prompts used in the sharing circles were utilized in the conversations, and I again relied heavily on my skills as a storyteller, listener, and facilitator to prompt the participant when necessary and allow for thoughts to conclude without interruption. Audio-recordings were used as the primary recording format with only minimal researcher reflections being jotted along the margins of the research questions to serve as reminders for my own work during the analysis. There were no time limits placed on participants, but the conversations naturally ranged in time from 45-70 minutes.
3.2.6 Method Three: Researcher Reflections (Field Notes)

Research reflections were collected as a means for me to remember events of significance, to make note of an idea or concept that I would like further exploration of, or to capture personal reflections and impressions of the process (Roulston, 2014). These notes were informal, following no set pattern or timing, and short in nature. Often it was simply a word that I wrote on the side of the guiding question document, so I could prompt myself in recollections during the findings and analysis phase. My reflections serve as a secondary source of data, and act in a supplementary manner to my own understanding and aid my memory. The informal nature of the note taking process during sharing circles and conversations was to ensure that participants were able to see their contributions were respected by having me engaged as fully as possible in the process, rather than scribbling in a notebook. The writing focused on items that were unlikely to be captured on the audio-recording of the sharing circles, such as a sensory observation like visual cues, or a personal feeling. Finally, there are some researcher reflections captured throughout my own workbooks, similar to entries in a journal, that I wrote to capture a moment of clarity or understanding during the writing process.

3.2.7 Ethics

The research process was guided by Anishinaabe minobimaadziwin (living in a good way). Formal ethics approval for the research study was also obtained by the University of British Columbia Research Ethics Board in early 2018 and renewed once in 2019. The ethical process of following Anishinaabe ceremony meant that I began my engagement with participants with an offering of tobacco. The offering of tobacco indicates my acknowledgement that I have asked for something, and I will act in a responsible way in the proposed engagement. Should a participant accept tobacco, she or he agrees to participate and acknowledge my offering of reciprocity for
her or his willingness to share. I explained this process in detail to participants prior to commencing the sharing circles and conversations. This included sharing my positionality, and the names of my cultural teachers so that participants could decide for themselves whether I was an acceptable leader for this activity. Finally, I provided consent forms for participants to read, inquire about, and sign as approved by the UBC ethics review board. At this point, we began with a smudge for the opening of the circles and the conversations held in Sty-Wet-Tan Hall. Conversations held in smaller rooms in the Longhouse were restricted to tobacco offerings only for ceremonial ethics as smudging was not allowed in the room where we held conversations.

3.3 Meaning Making (Analysis of Data)
Interpreting and making meaning of the stories and coming to the findings of this work took nearly a year. It took a great deal of time to negotiate my understanding of how to systematically approach this process with academic rigor, while also attending to my teachings on storytelling and the reverence with which I needed to engage participant stories. I came to realize that I was sitting in a place of responsibility to understand, respect, and echo the stories in a good way—I had to take care of them. This process was slow and methodical, where I listened to the audio recordings multiple times, sometimes jotting further notes down. At the same time, I took care to think about how I would transcribe the conversations and sharing circles and decided to use a transcriber so that I would not be distracted by thinking about reflections while trying to transcribe so I hired a professional transcriber. I had participants verify the transcripts, so we could ensure no personally identifying information was included and to confirm their stories were captured accurately.

Although I had early on decided to use pseudonyms for participants, I selected bird names with the intention of learning more Anishinaabemowin and protecting confidentiality. As I
was coming to understand through the process of remembering stories, I was able to recall the specific participant that had shared something with me as though I had learned a story or teaching from an Elder. Further, the names aligned with birds allowing me to see how I had simply done my clan duty; listened and learned songs from other birds, so that I may echo them where needed.

I would read the transcripts repeatedly and mull over what I had experienced. During all of this reflection work, I could hear the echoes of the stories shared in my mind. I could hear participant voices, remember their expressions and body language, and recall the feeling of being in circle with them. This process was a critical part of the echoing work. Throughout the months of remembering, I was repeating the stories and learning how to solidify them in a way that respected the original values, intentions, and purpose of the participant that had shared with me. This process of honouring the stories fit naturally with thematic analysis, allowing themes and patterns to emerge from the data in a “bottom-up approach” instead of applying pre-determined codes to the stories that would sift through and discard what did not fit (Rawana, Sieukaran, Nguyen & Pitawanakwat, 2015). Thematic analysis also provided the opportunity to explore the outliers within the data; the codes that were distinct because of the abstract positioning beyond the emerging themes.

Thematic analysis also allowed for the intended idea to echo the stories of the participants in a good way. If I follow the teachings of my people, when gifted the responsibility of hearing and caring for a story, there is an expectation that you will hold the values and intentions of the story true, while allowing for interpretations to happen with each listener. As a listener and caretaker of the stories from participants, framing the thematic analysis within my own understanding was suddenly clear. I would re-story what I had heard from participants, adding in
my reflections and interpretations to seek out meaning. As the participants were assigned pseudonyms of bird names in *Anishinaabemowin*, I also realized I had unintentionally provided a frame of reference for myself: I was now in possession of many bird songs, and I was simply going to echo the stories into new spaces and places.

I typed out the bird songs in re-storied format, as an act of both remembering and respecting what was shared and taking careful note of what was highlighted by participants in vocal emphasis, body language, or repetition (Kovach, 2010). This process helped to both to guide my own thinking around making meaning, and also to provide some data for the findings chapter to follow. From this point on, I was able to see how much that I had already understood about what was shared and sought to highlight points of importance (codes) throughout the bird songs. Undoubtedly, my cultural teachings, facilitation experience, personal reality, and academic training influenced how I selected these important highlights. These points of importance are then my own, based on the lenses through which I see the world and this research work. In considering how I would make sense of all of these highlighted points of importance, I realized that I wanted them to simply make stories I could read visually, *like constellations in the sky*. Considering the cultural interface proposed by Nakata (2007), I could envision constellations as both something visible, but intangible. Stars that create constellations can be from entirely different galaxies and this further reinforced my interpretation of the cultural interface as a complicated space of meaning-making.

I started writing out the points on post-its, using one colour post it per engagement (conversation or sharing circle). If there were multiple participants such as with the sharing circle, I used a different colour pen for each participant. After writing out all the points of importance on the post-its, I had the desire to organize it all visually on the walls. This is likely
similar to my original plans for analysis which included writing out units of meaning and visually looking for patterns (Maykut & Morehouse, 1995; Roulston, 2014). This was intended to allow me to find units or codes that align with existing literature on the topic, see thematic similarities amongst stories, and discover those that could be considered outliers. While I still utilized post its, and wanted to visually organize the points, the actual analysis process was far more organic. I began with one conversation collection of important points and placed it on the wall and clustered them based on similarity and moved them further apart based on difference. I repeated this process with each conversation and sharing circle until the wall was covered with post its.

**Figure 3-2 Post-its on the wall**

I stepped back and realized that I could story this by considering each cluster a constellation, each point a star, and the entire thing as both the sky, and the cultural interface. I named the constellations based on the tightest groupings of stars and considered the main theme those post its expressed. As a result, nine constellations were named; technology, connection, identity, language, social media, learning, Indigenous knowledge, protocols and protections, and colonial policy. Once the constellations had been named, I took photos to ensure accuracy was maintained. I transferred the constellations to large pieces of poster board and taped the stars to each constellation/ poster board. This meant that I was able to move the constellations around and lay them out again quickly and neatly. After arranging the post-its (stars) on the wall, I
looked at how the constellations emerged after placing the important pieces of the stories together. They are laid out in 2D, but to truly understand them one must consider three dimensions as if we were looking at the night sky: they are all held together by gravity, but with differing influences and connections to each other, some appear to be close based on where we are standing but they may be much further away from another perspective.

I further considered how the cultural interface proposed by Nakata (2007) created a framework for understanding the thematic analysis result and allowed for complications such as outliers within the analysis process. Second-language acquisition (SLA) theory, specifically sociocultural theory is present in codes and generally referenced in the constellations called language and learning, however, the codes and the constellations emerged out of the data rather than from literature and none of the participants in the study were acutely familiar with SLA theory. It felt validating that the theoretical frameworks selected for this research were echoed in the analysis process but served as frameworks for organization rather than tools for interpretation.

3.4 Chapter Summary

The words and stories shared with me are truth in themselves and contained all the meaning that was meant to be shared, but I also heard echoes of the literature in some of the brightest stars in the constellations. Undoubtedly, this is an aspect of the lenses with which I approached the research, but it was particularly encouraging to hear that some of the work surrounding Indigenous knowledge protection and user-engagement design in language and cultural learning technology are important consideration for the youth as well. The methodology of this research is summarized as follows: I conceived of a research process based on storywork (Archibald, 2008) that was interpreted by an Anishinaabe worldview. During the knowledge gathering
process (Hare, 2001), I heard bird songs, re-storied what I had learned to make meaning and by doing so, found stars, and organized them into constellations. These findings and further discussion will be provided in the subsequent chapters.
Chapter 4: Coming to Understand (Findings)

I have been writing all morning and feeling excited and overwhelmed. I have one sharing circle left of post-its to do and need to start mapping the constellations on the wall to really see what they have to say. I am getting excited and maybe a bit lost again, and then I hear them. The eagles are calling me. I go outside and there are four of them circling above me, calling, calling, calling. Tears are streaming down my face- good tears though. I know I am doing good work. I know they are cheering me on. Chi miigwech migiziwag.

Ishpimiing niwin gizhibaayaashiwag migiziwag (there are four eagles circling in the sky)

(Personal Journal, April 23, 2019)

This chapter offers a detailed perspective on the findings for this research project. In the first section, I have organized the findings into running narratives that re-story (Kovach, 2010) what was shared with me by participants. I have called these stories bird songs to reflect the pseudonyms of each participant, but also to draw on the narrative structure in which I re-story them. These story songs include highlights from audio-recordings and transcripts, as well as researcher reflections. Within the story songs that I have taken care to highlight some of the most impactful stars from each knowledge gathering process to better contextualize how these stars were then mapped into constellations.

A more fulsome discussion on how the constellations emerged through interpretation and analysis follows in the second section of this chapter, which I have titled reading the sky. This provides the context of how stars were grouped by similarities and themes, drawing connections
between the stars and constellations based on stronger correlation, and shares some of the observational narrative of how I came to understand the findings.

4.1 Bird Songs

4.1.1 Sharing Circle 1 - Zhiishiib & Bine

Zhiishiib and Bine are both graduate students and young women in their mid-twenties who grew up in their respective traditional territories, but now live in an urban space to attend post-secondary. Though they are from different nations, they shared similar experiences growing up and dealing with living away from community in order to attend graduate school. Immediately Zhiishiib shared how helpful it was to have this community knowledge online because it allowed her to feel connected with her identity and feel at home while being away from home. Bine spoke of living further away from home than ever before and that being online helped her find the time and space to feel connected to her community, even if she was not physically present. When considering the basics of what technology is, both Zhiishiib and Bine saw it as a tool, but shared cautious feelings because of the potential for over-reliance on technology for engagement and learning but missing out on the connection and context as a result.

Social media came up as an opportunity for outreach as well as a way Indigenous people are making their presence known online, and Bine shared that Idle No More was an important moment for her to really feel like there was a noticeable Indigenous presence of community online. Zhiishiib stated that social media was a way for her to see what gatherings were coming up, so she could attend and find that “sense of belonging that [she] was really missing from home” (Zhiishiib & Bine, personal communication, May 9, 2018). Bine noticed memes in social media that present Indigenous-specific humour and identity discussions that served as a reminder of her connection to the community, even when spending a majority of the time in Western
institutions. She also saw “political thoughts and opinions” coming through memes via Facebook and Twitter in particular. Zhiishiib often saw people sharing their identity in social media by posting in their language, sharing images of community-specific things, and even pictures of themselves in regalia. Although Zhiishiib was unable to read the posts in the language, she knew that the person posting was able to learn the language from Elders and family in a way that Zhiishiib is unable to do for the time being. She spoke of connecting with that knowledge when she moves back and said, “[e]ven when there is no translation underneath it when I can get the feeling it doesn’t matter what the words mean”.

The connections both Zhiishiib and Bine shared may seem small or limited, but they clearly act as waypoints to maintain the connection to their communities while physically separated. Words in the language, images of familiar places and things, even opportunities to gather in the urban space where they currently reside provided an opportunity to reinforce their own identities on their journey in post-secondary institutions and in urban spaces. Bine saw people conversing in the language on Facebook and although she was not able to follow the conversation, she sees it as “empowering, symbolic, and a tangible consequence of resistance”. That claiming of space online speaks to a “history of colonization and residential schools… when we almost lost the language… to now, a few decades later—this is a testament of resilience”. She went on to discuss this new reclamation of language in a new space is not taking away from how our ancestors used it, instead acknowledging that while “[t]here may be speakers out there who don’t use social media… the youth do”.

Both Zhiishiib and Bine have seen efforts from their communities to bring language learning to online spaces, but with mixed success. Zhiishiib shared the difficulties of providing accurate information on the two dialects of the larger language family. Bine’s community largely
turned to online learning because of costs associated with in-person language classes. Both of them spoke again about the fear of missing context if they learned the language online and longed for an opportunity to engage with relationship whether one-on-one or in a group, with an additional process to utilize video-calling or phone conversations. Bine found some opportunities provided through her language learning app helpful, like a word of the day, but still felt like the context is missing- the way the apps and online lessons were designed compartmentalizes knowledge instead of creating connections between the knowledge the word contains and the epistemological structure of the language overall.

Both Zhiishiib and Bine found value in the capability of technology to document and subsequently revitalize stories and language, and particularly in the inspiration it provided for them while away from community. They were able to engage with the work of others, share the work they do, and maintain connections to their identities as a result of technology and social media in particular. When describing their own social media profiles, both Bine and Zhiishiib tailored their followers to people they engage with professionally and from community and left their settings on private. The posts that they made or shared via social media were often focused on Indigenous issues, so the tailored followings ensured there was no need to explain the posts or worry about ending up in a political debate. Bine found herself dealing with an urge to jump in and provide a logical argument to some comments seen online but considered the work she does in education as a contribution that is better received, particularly given the ability for people to remain anonymous online—there is a distinct lack of accountability in interactions online that they saw as motivation for remaining less engaged online.

Bine went so far as to say, “there is no such thing as protection” online, as we discussed the dangers for people using social media. We all shared our own experiences with negative
experiences online, of which we have had many. Bine continued, “I can only choose within my physical world who I surround myself with, but in technology you can’t protect yourself. It has never been the same after that [negative experience] and I have been so much more protective. I do this by disengaging and making it exclusively professional verses anything personal [online]”. Zhiishiib also had uncomfortable experiences online and considered how those stories influenced her feelings on Indigenous knowledge and language online.

Bine and Zhiishiib spoke of the responsibility that went along with learning, and the difference between readiness in western education, which can rely on a simple sense of curiosity or willingness, compared to learning about Indigenous knowledge which often requires multifaceted readiness that includes willingness, preparedness, and appropriateness. There were many examples of appropriation online they each saw by looking up hashtags associated with their communities. When they saw authentic artwork and language from people in the community, this inspired further exploration into their own identities. Bine considered how technology can be an invitation to building a relationship, which Zhiishiib agreed with- that technology was not a “substitution for those relationships and engaging in your community” but it was an invitation to begin. They also considered their own positioning as individuals with a foundation of community connections, having grown up with community. The connection to land, context, and community is an important part of the learnings so considering technology as a beginning, as the start of a relationship and connection is especially critical for those who grow up without that foundational knowledge.

YouTube, podcasts, and more interactive learning opportunities with knowledge holders came up again. “How do we counteract the effects of the colonial policies but take up tools that
“Can revitalize in good ways?” I asked Bine and Zhiishiib. Bine talked of opportunities for
language immersion as new measures of Indigeneity:

These hierarchies are almost like punishing people for now knowing their language and
their culture after they were put through residential schools. Language can either act as
one’s bridge to their identity or hold them back and make them feel not connected… we
[the young ones] are left to pick up the pieces, we have to do what we have to do because
the alternative is doing nothing.

Zhiishiib found identity issues difficult for her even though she grew up in community,
sharing that people call her “city girl” when she goes home now. Bine shared a beautiful story
with us about walking in two worlds:

Something that has helped me feel more settled walking in these two worlds was when
someone asked me if I ever felt like a trickster or a shape shifter. A trickster is often
portrayed as a villain, but they aren’t, they can learn to walk between many worlds and
none at all and can take on all these different roles. I have learned how to embrace the git
that I have to be a shape shifter and be able to walk the two different paths. I think it is a
strength and not a weakness.

Zhiishiib shared how this story made her feel so much better. She also struggled to walk in both
worlds and felt like she was originally hiding her identity but is trying to be more comfortable
with herself.

As we considered the connection between language, culture, and identity more, Zhiishiib
mentioned how important her mom is to providing community links. Some of the links she sent
were via Instagram, emails, and text messages. Although Zhiishiib has a language app, and
accessed other language websites, none were her specific dialect so there was potentially still a
lack in the validity of translations. Bine found the app she has lacked in functionality, and instead preferred to see live-stream videos via social media, which also allowed more choice in how involved you wanted to be as a participant. She pointed to the initial funding that is provided to communities to begin language and cultural revitalization but no follow up funding to maintain levels of stability and updates that create sustainability and longevity. Zhiishiib considered an opportunity for sustainability via Facetime; allowing relationships to flourish but reducing both financial and time costs for participants. She even considered how language speakers and knowledge holders might go out on the land and record information via their cellphones, so others are able to participate in that “virtual and interactive connection”. Bine agreed, referring back to how word-of-the-day, while valuable, was missing context. Zhiishiib shared an experience of people misunderstanding context even in-person, when at a community event, someone was trying to record the event via drone, which was distracting and “detrimental to the experience”.

We wrapped up the discussion by considering placements of language. Bine wanted to ensure these efforts are not simply “Indigenous led”, but “Indigenous first”. Place the words in the language first, then worry about the translation after. “Particularly because language for people isn’t just the words but it’s the teachings and the history and an expression of so much more. If you try to just translate it, you are missing so much more”. Zhiishiib added, “it’s like trying to fit a square peg into a round hole if you are trying to westernize it”.

4.1.2 Sharing Circle 2- Meme, Nika, & Waabizii

The second sharing circle for this process was held Friday May 11. Our round of introductions with three participants began with Meme. She is 31 years old and situated her story by sharing that residential schools resulted in a disconnection between her family and community. She grew
up with ceremony but is “coming into [herself] as an adult in a different way”, she also
introduced herself as a visitor in this territory (Meme, Nika, & Waabizii, personal
communication, May 11, 2018). Nika is the youngest participant of the research project at 21
years old and identifies as Métis and western European, as he only came to learn he was
Indigenous at age 15. He also is trying to understand the profound effects colonization has had
on his family as there is no connection between his Métis family and the community. While
visiting in the territory at his post-secondary school, he is working to figure out what is missing,
learn about other cultures and how we can revitalize them. Waabizii is 25 years old and shares
that she grew up “knowing [her] heritage, but not with an intense connection”. In her earlier 20’s
she was able to connect with her father, also a residential school survivor, and begin her journey
of cultural connection. She feels the power within language and without the connection of her
father she turned to technology as the first chapter to “learn more about who [she is]”.

Our first exploration of what technology means to everyone centred on; communicating
without having to be physically present, building communities that can then translate to in-
person connections, easy access to answers, and accessing a resource that can facilitate learning.
Waabizii said though technology often gets criticized, she considered the opportunities for
engaging and connecting through technology to be a massive benefit. Meme agreed and said the
“real time and real connections” are important aspects of her experience with technology, while
Nika nodded. Meme’s family lives over 10 hours away by car, and having instant connection
was essential for her: “Being far from home [technology] maintains your connections with
home”.

Our discussion turned to the differences between connections now and in the past.
Waabizii spoke of a poet that writes of how ceremony looks “different for urban Indigenous
people”. Meme acknowledged she is still trying to navigate around protocol such as no photos of ceremonies and considered what that meant for people in urban spaces. She pondered how do we share information and teachings in a way that is “aware of the old ways” but also considers what transformations are necessary for new technologies? Nika acknowledged he has seen some examples of misrepresentation of Indigenous people in games that were particularly disgraceful and considered how communities can be mindful of what kind of information was shared. He restated the importance of navigating protection of knowledge with providing information to those who were trying to learn about themselves. Meme considered whether some of the posts she had seen on social media recently had been shared with good intentions, and also reminded us to consider whether “it is yours to give and share”. Waabizii has encountered some incredible work during her time at post-secondary but was aware that some of it was created specifically for a community that contains sacred information and acknowledged “they aren’t my names to share”. Meme further confirmed this was the root of her discomfort- the lack of protocol on the Internet. She also highlighted the flexibility of technology to provide visual, auditory, and sensory learning opportunities as an opportunity to engage a wide range of learners. “Navigating the protocols” is necessary, “[b]ut we need to find a way to share the information”.

The differences in dialect arose as a challenge for language learning and revitalization, and Meme referred to her language learning app as helpful but limited. Facebook has provided more meaningful engagement with learning the language as she was able to see a language speaker pronounce the words and even said “watching the videos at home it felt like we were in the same room”. Waabizii used the same Facebook language learning site as Meme and particularly enjoyed seeing the engagement from people who speak different dialects in one space. Nika acknowledged that not all communities have the reliable access to technology that is
available in urban spaces but considered the barriers that exist on both ends. In community you may have access to knowledge, but formats for sharing are limited. In urban spaces formats and connections are available but the connection to knowledge can be limited. Meme acknowledged that while technology-based connections are not always necessary for members in the community, she thought “it’s really for us urban people who are not a part of the community. I feel like at times it is the only connection and it can be pretty lonely”.

When considering the kinds of technology that offer language and cultural learning opportunities Meme pointed out how visual the opportunities to learn were online. She went on to say, “we are in constant stream of visually consuming information”. This is the norm now; 13-year-olds with smartphones, and “TV’s, billboards, advertising…not just computers” have trained us to become visual learners and consumers. “I think it’s an impossible thing to ignore, especially urban youth. This is how we communicate now”.

Waabizii used Twitter to focuses exclusively on Indigenous issues and because she tailored who follows her and carefully selected who she follows, she has less interactions with trolls. She said, “Native Twitter is where I get the most information”. Waabizii even reconnected with her birth father via social media. Now she connects with her aunties on Facebook and builds community through social media. Meme talked of the occasional urge to delete Facebook but then quickly realized she would lose the connection to many people in her community and the daily Cree word. Nika fully admitted he could never delete Facebook, but admitted he edited who he follows regularly. There were many communities Nika considered himself part of, and social media can help create and maintain those connections, but it also required careful attention because it can be used for good things or bad. When considering the safety of Indigenous knowledge online Nika pointed out “you aren’t going to be able to make a perfect system and at
the end of the day it’s a system. Nothing is truly safe on the internet or anywhere else for that matter”.

When I asked them to consider how they presented their identities online, Meme stated she identified as Indigenous and knew all the people that follow her personally. She considers those connections to be relationships, not simply a meaningless follow. That approach also allowed her to feel comfortable expressing her identity and her views on issues. Nika also has a private account on Instagram and was very particular about who he accepts as followers. He shared that even openly identifying as Métis in-person is part of a gradual shift in the development of his identity. Although he did not spell out his Indigenous identity in his online profiles, he has begun to share Indigenous issues via his accounts. Waabizii says although she has not used her Instagram account in over a year, she now wanted to go back and reconsider how she presented herself. She felt it was important to acknowledge she did not grow up in the community and said, “I am still learning, and I view my identity as an ongoing process of learning”. Even though she considered herself more of a “social media observer as opposed to a participator”, she was excited to see others express their Indigenous identity in their profiles and posts, considering it another form of “decolonizing and saying, ‘I am here’”. Her use of Twitter, though important, was also sporadic, however she still considered it a way of connecting to people. Meme found profiles that share positionality to be a helpful identifier of Indigenous people, but also of people who should (or should not) be speaking on a certain topic. “Once I learned how to place myself, it became very important to me to learn where other people place themselves”. She shared her difficulty working her way through decolonizing her understanding of identity, moving away from feeling like she could only identify one way and focus all her
energy on that to acknowledging that she has many layers of complexity and they were all important aspects of who she is.

As the group discussed whether one can connect to culture through technology, they agreed it was possible so long as context was there. Waabizii highlighted the importance of face-to-face engagement and understanding the land where the knowledge came from, specifying that relationships are important to the potential success of a connection to culture through technology. Meme considered how her foundational knowledge in culture resulted in an immediate yes on her part, clarifying that the holistic context is necessary for anyone seeking to build or maintain that connection; “I don’t think it’s a replacement, especially if you don’t have that foundation but it’s a good supplement if you are far away from home or if it has been a while”. Nika also considered the immersive experience that simply is not possible via technology. Participating in a powwow, dancing in a powwow are not the same as watching a powwow video on YouTube, although there is value in that as well.

Waabizii further considered how technology allows people from different levels of understanding and different perspectives to engage with knowledge. She said YouTube would offer an opportunity for her to hear more words, potentially even in her community’s dialect instead of simply trying to read out something from a book. Meme also struggled with figuring out pronunciation when trying to learn language from a book and again shares that this is part of what has made Cree Simon Says on Facebook such a valuable tool for her. Meme and Waabizii discussed the importance of having a safe place to practice as they learned the correct pronunciation of words with other learners. Meme suggested a layered approach, thinking about how to utilize technology and relationships to strengthen language proficiency and community connections. Nika agreed and suggested there could be different iterations of offerings, from
apps similar in design to Rosetta Stone, to FaceTime appointments with language speakers or online classes for learners at the same level.

As each of them shared their closing thoughts, they noted a difference that was felt by sharing in circle and being in a safe space with cultural practice created an opportunity to express their ideas more freely. They further appreciated the ability to be in a collective discussion and acknowledged the fluidity of the layers of sharing created an opportunity to share what they wanted/needed to in the moment, and sometimes finding a foundation to build upon in each other’s contributions.

4.1.3 Beshkwe’s Story

Being in her early 30’s, Beshkwe told a story of growing up with technology, but of being at an age to remember the transition. A time that began with big brick cellphones and brought us to now- with minicomputers masquerading as smartphones. Transitioning from a time of one desktop computer, shared amongst the family, and restricted by the needs of family members with the phone. Nowadays, Beshkwe sees the excessive time consumption of technology that borders on addiction for many of her circle of friends.

She shared her experience with Instagram helping her to find a community of beaders. Although there was once little in the way of Indigenous culture represented in this space, she now has a dedicated account specific to her own beadwork in addition to her personal Instagram account. After searching via google for the work of two sisters, she found nothing and was instead directed to Instagram. Through this social media platform and the explore function within the app, she was able to discover different forms of beading, find inspiration, and access links for tutorials on YouTube to improve her skills. Beshkwe spoke of creating an archive of beadwork inspiration, but soon learned of the possibilities to buy, sell, and trade beadwork via Instagram.
Seeing the possibilities technology offer to enhance understandings of Indigenous artists at galleries and provide language learning apps, even asserting the use of language in her own emails was empowering and continued to motivate her through her own journey. Social media and technology provided a space where it is ok to be on a journey to learning the language without having to learn everything all at once. It also offered the possibility to create smaller, safe spaces for people to virtually gather. Although Facebook can be rife with unhealthy behaviour and anonymous trolls, Beshkwe’s family created a private group to offer a way to escape lateral violence and continue discussions on important community topics. She used the term lateral violence here to explain how members of her own community can often occupy an antagonist position that inflicts harm through unhealthy behaviours. An important aspect of this story is the lateral violence suffered by some Indigenous people who pursue higher degrees in academia and have to seek out secondary spaces where they can contribute. Speaking of the capabilities of Instagram, Facebook, and other technological advances in the past couple of decades she said, “now we have enough technology to build our community” (Beshkwe, personal communication, May 6, 2018).

Beshkwe shared a story of people creating a “second life” via technology, where you can be “loud and proud” about your identity as an Indigenous person and as an artist. She went further when speaking about individuals who shared knowledge via social media and said people were now “creating ways to be in circle and be connected through these platforms… technology [can] help us get back to the ideas that we have the right to self-determine what we are going to be”.

Technology provided a connection to family through a photograph of her grandmother’s beadwork, which a cousin saw and contacted Beshkwe to find out how they were related.
Meeting family in this way also offered a way to make connections without necessarily needing an intermediary or family member to make introductions for you. “Technology encourages access”, provides “multiple points of access”; it was a way to “create a place that’s for yourself and then invite other people to it”.

Beshkwe felt drawn to jewelry and beadwork in particular but felt limited access to learning opportunities for traditional beadwork was a challenge. Technology opened up opportunities to access new information and other artists while awakening her “blood memory”. Of particular impact was the access technology provided to information on combatting appropriation. She highlighted that seeing what others wrote about protecting sacred knowledge and sharing their own stories, framing their own work, and defining themselves to take the power back from media was both motivating and helpful. Scholars such as Chelsea Vowel provided education and information to people online that Beshkwe could then provide a link to, instead of responding directly to troublesome posts.

She particularly noted how she was able to see Anishinaabemowin through Instagram (including her own profile) and follow word-of-the-day work by an Anishinaabe scholar on Facebook. Returning to discussions of art, she spoke of how artisans were occupying space throughout the internet including Etsy and YouTube. She even shared that for other artists, potential areas to explore would be how to share context of art and teachings so people learning a specific bead style, or weaving practice would know a bit about where it came from, saying this would also help her understand what information would be appropriate for her to learn. Beshkwe also acknowledged the challenge of learning styles; considering how this generation grew up learning, stating we should consider “opening up the space and boundaries around the traditional ways of learning this knowledge”.

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In reflecting on the impact of technology on her connection to culture, Beshkwe stated, “I think without technology and the access I have to do self-learning I would be sitting here as a white woman and [I would have] learned all the dominant, non-Indigenous culture that was forced on my family”. She went back again to how important it is to have women supporting women and getting back to the way how we traditionally supported each other. Getting back to that place where you can empower indigenous women to hold knowledge and share knowledge and come to that in good ways and be able to honour that.

4.1.4 Gwiingwiishi’s Story

Gwiingwiishi shared her story of growing up in the traditional territory of her people, but without a connection to cultural practice through community. As one of the youngest participants at 22 years old, she shared her journey over the past year as she began to connect to the traditions of her nation. She is now learning her language in a classroom setting but highlighted the importance of utilizing Facebook to share the language, practice writing, and even receiving videos from her instructor to hear proper pronunciation. She acknowledged the ubiquity of technology and the comfort younger generations feel with technology that offers an opportunity for learning and creating connections in the community.

Social media plays an important role in how she presents her identity and shares issues that are important to her. “I represent my culture online by representing myself” (Gwiingwiishi, personal communication, May 9, 2018). Writing in her language was a source of pride, while also creating a safe space where she does not have to worry about proper pronunciation. Gwiingwiishi also specified that the people who follow her on social media represented a cultivated group of supportive friends, family, and connections so she was able to feel safe.
sharing as she learned, while also helping to develop relationships with family members and
community that would have been much more difficult in person. She even shared her perspective
on the potential power of social media as “a tool to get my voice out there and to echo voices that
aren’t near me”.

This is not to say Gwiingwiishi was unaware of the pit-falls technology creates. Risky
behaviour by young people on social media, risks of appropriation of knowledge, and being
certain of where knowledge originates online were all aspects of technology to consider. “I see
technology as being a kind of a transporter, transformer, and a connecter”, which communicates
the potential to capitalize on an educational tool, draw on youth strengths and passions and also
give “youth that outlet to revitalize our culture in a way that we can excel in”. She suggested
utilizing Skype to set up language and culture learning opportunities between knowledge holders
and youth and develop a connection that can lead to experience and in-person connections. This
type of set-up would also ensure information remains shared with only those that should be able
to access it, while creating an opportunity for connection. “I think technology really helps you
connect after that connection is already made. Or it helps you prepare for that connection”.

Acknowledging the importance of keeping sacred cultural knowledge safe, while also sharing the
importance of being in ceremony and understanding the context of teachings shows the
consideration given to potential benefits and challenges of technology for sharing, preserving,
and revitalizing Indigenous culture, language, and identity.

4.1.5 Diindiisi’s Story

Technology could be “anything that makes your life easier or better” (Diindiisi, personal
communication, May 10, 2018). At 24 years old, Diindiisi uses technology quite frequently and
even uses it to text and Facebook with her grandmother, even though they live in the same house.
She uses an app to check the news and communicates with friends and family through Facebook and Instagram. She found there is ample Indigenous culture to access online through various websites but also specific subsets of social media such as “Indigenous twitter”. Diindiisi shared the impact of “Native meme culture on Instagram and twitter” as an opportunity to promote culture and bond relationships through humour. She pointed out the use of Indigenous creativity in satire via sites such as Walking Eagle, which some people incorrectly assume is a legitimate news site. One of the most interesting points that she shared was highlighting the frequent and creative use of Indigenous slang, noting this also bonds people in social media spheres, creating spaces to call out misrepresentation in media and discuss current events. Diindiisi acknowledged that she sees a great deal of Indigenous language on social media largely due to the selection of people and accounts she follows, but still would love to see more.

Diindiisi pointed out the importance of having connections via technology for urban people separated from their lands (often not by choice), as well as for the youth who are unable to learn from family members—for whatever reason. This is one of the reasons she and her partner were working on learning family history, genealogy and language online. She would like to have access to more audio and video files for language learning specifically as dialectical differences can mean she is not able to learn the language as spoken by her community. Another important consideration for Diindiisi was the worry of knowledge being lost as our language speakers and cultural leaders pass on. She has encountered incredible resources online including recordings of community songs from hundreds of years ago however, she also knows the reality of research in the past has often been extractive and damaging to communities. The opportunity now for community members is to benefit from the knowledge that exists in technological spaces and bring people together and help develop their Indigenous identity.
One of the most impactful stories Diindiisi shared was of her own internal debate on whether or not she is “worthy” of the knowledge she finds online. She spoke of her working her way through accepting that this knowledge is part of her birthright as an Indigenous person. Though she admitted this is a result of the colonial policies of Indian status and blood quantum, she still struggled with other people’s perceptions of how she looks;

My dad told me if I could experience Indigeneity and if you feel something in your heart that pulls you toward it then that’s your Indigeneity. I’ve always felt it on a deep level and wasn’t sure if that was enough but him saying it was enough it really allowed me to accept it. I try to acknowledge all the privileges that I have grown up with and I acknowledge my white passing and acknowledge that wall. It is a huge part of who I am. I grew up thinking my dad was native and with people asking what the blood quantum was.

Technology has offered Diindiisi an opportunity to build her knowledge of her language and culture, while also helping her develop confidence and trust in the knowledge of who she is.

Diindiisi was grateful for the fact that websites and apps like First Voices™ exist since it was the only way for her to access that language knowledge, but she also acknowledged that it might feel “too messy or too clumsy” for young ones that are used to streamlined technology with smooth operating capabilities and flashy and trendy graphics. She found videos to offer a better connection to the information than simply reading online since you can see their mouth move and the gestures they make along with the word.

Protecting information online is critical, with Diindiisi reminding us to consider “Elders who have worked so hard to protect all the knowledge that they have or have worked so hard to come back to”. We need to find a balance, so we can draw people into connections with
community, but also keep knowledge holders feeling safe that the knowledge will be protected. Diindiisi also considered the space to improve apps and dictionaries so that people seeking information can find it and enjoy learning when they do. Improving the use of multimedia videos, stories, songs, larger collections of words and games for people to engage with in formats that allow users to save progress and journey through the work in a way that leads to connections with people face-to-face will preserve knowledge, revitalize languages, and help people develop their Indigenous identities in a good way.

4.1.6 Aandeg’s Story

Aandeg is 35 years old and joined this research project because of his belief in the importance of meaningful and careful consideration of how technology is used with/ for Indigenous knowledge. He began his story with the acknowledgement of the dual nature of technology- it offers us options for sharing culture and language, but it should be approached with “due diligence” (Aandeg, personal communication, May 14, 2018). The first part of our discussion centred on how to be cautious with Indigenous knowledge online and reiterating the importance of checking sources and checking with people you trust to ensure the validity of what you find online.

Both language and culture are rooted in the land, and Aandeg drew upon the importance of connecting what you learn online to teachings from the community and trusted knowledge keepers. As he shared his reflections on learning Cree through websites and online dictionaries, he stated “[w]ithout that community tie I feel like I am losing my connection to my ancestors”. Learning language online provided some information but was missing the context of the teachings that live within the language and the culture. He called for communities to address the shift in youth interest and comfort in online spaces so as to prevent that loss of context happening further. Aandeg referred to the Musqueam Nation and the work they have done to
host information online safely by restricting access as an example of how communities can meet the needs of the people and also ensure the knowledge remains safe.

Aandeg’s father went to residential school and “never saw the need to pass [the language] on to his kids, he always saw it as a disadvantage”. As people seek out information and are met with resistance, or incomplete information, it could also put them in a “bad situation”. Aandeg shared a story of a young man who was watching over a drum at a powwow and was asked by an older man if he knew the language and the stories behind the songs. When the young man was unable to answer, he realized “he wasn’t as connected as he wanted to be” and he stopped drumming. Aandeg then spoke of the possibility of knowledge holders’ viewing leaners as outsiders rather that people from our own communities just trying to learn. How can we encourage learners in ways that does not berate them or make them feel like “they don’t want to be Indigenous”? He then acknowledged, “[w]ithout that guidance, I can be as lost as anyone else”.

Although Aandeg was cautious about putting Indigenous knowledge online and having people learn about the culture in digital spaces, he did acknowledge the value in taking time to create safe spaces for the knowledge that create connections and act as “stepping stone[s]” for people learning about their community. Much like other participants, Aandeg mentioned video-calling capabilities via webinar as an opportunity to engage with the language and have that interactive experience that does not exist in online dictionaries. Throughout our conversation he balanced the potential benefits of technology with the risks and reiterated, “you have to learn how to navigate context”. He called for “accountability and responsibility” in moving forward, but also reminded us that as Indigenous people, “[w]e adapt. We always adapt… it’s a different world and we have to adapt”.
4.1.7 Apichi’s Story

Apichi is 29 years old and began by acknowledging how her “life and connection to [her] ancestry was very much disrupted by the Indian Act” (Apichi, personal communication, May 15, 2018). As a result of her family being raised away from their traditional lands, she has been “journeying and figuring out how technology can play a role” in facilitating her connections to the ancestral knowledge of her community.

Apichi is an active Instagram user and follows “a lot of Indigenous writers, beadresses, midwives, scholars and [her] Native friends”. She selects who to follow based on those that reflect her values and speak to her worldview. She also shared that Facebook plays an important role in keeping her connected, even saying, “many of my community members and Elders are very active Facebook users”. Nonetheless, what she posts or shares was usually “Indigenous specific”. Apichi uses social media posts, shares, and interactions as teachable moments and opportunities to raise awareness.

Apichi found social media easier and more fluid to use, sharing that while First Voices™ has great information for language learning, it was not very user-friendly. She admitted that, [w]ithout technology I would have really struggled. When I started learning, all I wanted to know was how to say thank you and hello and these very basic things when introducing myself and acknowledging gratitude. Even with such a massive family, most of them went to residential schools and the language wasn’t passed on.

Learning the language through a website with no interactivity limited understanding because one never knows if they are pronouncing the word correctly until they use it in public. She further shared the struggle to accept whether learning language online is “respectful or good practice”, particularly given the importance of connection to land and the nature of language being grown
of the land. Although she felt cautious about learning online in various formats, she shared that her grandma’s enthusiastic use of Instagram served as inspiration to use the tool as best she can.

A profound moment for Apichi was when she was able to say thank you in her language, sharing “It made a huge difference in terms of my own identity because I was able to introduce myself in a way that I could see my ancestors looking down and being proud”. She cited the speed of connection as a major benefit of technology but longed for more space for networking with knowledge keepers, potentially even having one-on-one learning opportunities or group language classes online. Apichi took care to let me know this was not something she would wish for if the Elder or knowledge keeper was uncomfortable with it but offered it as a possibility to be considered.

Apichi referred to a teaching about not necessarily picking up all of the information that is laid at your feet, and instead taking care to discern which ones were meant for you. She then considered how we could share the teaching that “knowledge is a tool that needs to be used to empower young people…to navigate life”. This was especially important given the risk of appropriation if knowledge was shared without care online, but also because it risks perpetuating the “disconnect” between teachings with purpose and context, or information that had been shared blindly in a move toward total openness. Apichi’s honesty humbled me when she stated, “as someone who has googled their way through being Native, I think it’s really important to think about acknowledging the roots of knowledge”. This statement summarized some of the challenges young people encounter when seeking connection, but also served as an important reminder that even in the virtual online space, one must remain mindful of the “roots of knowledge”.
4.2  Reading the Sky

As discussed in the meaning making process (analysis) in the previous chapter, I relied on multiple lenses with which to approach the story songs shared with me by participants. Cultural teachings, academic discourse, facilitation experience, and my preference for visual organization resulted in the use of colour coded post its and further colour coded pens for each participant. Once highlights had been written out, the post its were placed on the wall based on similar words or ideas amongst stories. Though this is similar to a formal thematic analysis process, akin the work of Maykut and Morehouse (1995), my intention was more organic, and I did not refer to any literature during the process. Once the post its were placed on the wall, I interpreted them as stars in a sky that could be read and used to guide understanding of how urban Indigenous youth are utilizing technology to connect to identity, culture, and language. The naming of the constellations emerged as a result of stepping closer to the wall and seeing what the clustered post its referred to. Sometimes the word was simply written multiple times on the post its, such as with social media, and other times it was a larger overall theme related to the research questions, such as technology and identity. Finally, some constellations were separated out and renamed as they were too limited. For example, I had originally considered language and learning to be one constellation called language learning based on my research questions. Upon further consideration, the stars and the contributions of the participants suggested a broader constellation of learning which included pedagogical strategies, tools, preferences and a separate constellation of language which referred to dialectical differences, translations, and even representations. Although there is a strong correlation between the two constellations, each one contained multiple stars that were related to other constellations such as protocol and protection, and identity. Thus, the constellations were grouped by largest clusters of stars with a map drawn
to highlight areas of strong connections represented by stars that could relate to multiple constellations.

**Figure 4-1 Constellation map**

There is much to be said about the stories I have heard, but I will share some interpretations and highlights of the stories I have come to understand so far. The most prominent thing I noticed is resilience. The stories shared with me have long legacies and roots to colonial policies over many years, but the youth voices were strong in the work and dedication they show to reclaim what is rightfully theirs. There is respect. The participants approached their learning with an air of reverence; approaching all that they encountered with wariness that speaks of the colonial legacy and a deep, instinctual knowing that honours teachings with
patience and heart. Responsibility to the ancestors, to the incredible dedication shown by residential school survivors and knowledge keepers to protect knowledge is acknowledged and echoed through the stories of the youth. The longing they feel to access the knowledge and come to understand in a good way is tempered with the respect of the Elders and knowledge that the responsibility now falls to them to protect the knowledge but also shared it with the young ones. Many spoke of the interrelatedness of the colonial policies to family dynamics and access to cultural knowledge (or lack thereof). They also saw the connections between communities of different nations and different locations that deal with the same things. They see strength in collaboration and consider technology a tool to assist in the bonding and rebuilding of us all. The synergy felt through connections with other people empowers them and motivates them to stay true to what is calling them. There is a deep desire to share that energy, to echo the good feelings with younger ones making the struggle a little easier for the next generation than it was for them.

I heard how relationships were built with people, family, communities, and themselves. They shared personal struggles of coming to terms with identity and colonization internally and externally in community and through online spaces. The stories told of that one shining star that helped guide them through the dark into a place and space where they could fill themselves with good teachings and connect to ancestors and cultural knowledge.

4.2.1 Technology

One can see the considerations and cautions offered about utilizing technology mindfully to ensure work is conducted with the right technology, rather than simply the newest or flashiest. All of the participants were very clear and forthcoming about their hesitation to rely on technology, while simultaneously acknowledging the possibility that technology can help communities achieve their goals of preserving, revitalizing, and reawakening languages and
communities. Technology was positioned clearly as a tool in their minds and it was critically stated that technology is not seen as a replacement to traditional pedagogical strategies in Indigenous communities, but rather as a first step in a long journey, or as a way to reinforce bonds and relationships that already exist. The familiarity that youth have with technology, both as a tool and as a means of creating and maintaining communities was seen as an opportunity to capitalize on, rather than one to fear. Beshkwe highlighted the fact that technology offered independence for her to connect with community members and language speakers. The intimidation of approaching unknown community members in person was a challenge that she felt could be reduced by utilizing technology. Zhiishiib also noted that utilizing technology as a means for learning did not require an intermediary in the form of a family member to connect with knowledge keepers. This was often connected to ongoing impacts from colonial policies such as residential schools and loss of Indian status, but each of the participants highlighted how technology could enable them to make and maintain connections, while respecting family members’ preferences for engaging (or not) with their Indigenous communities. Perhaps one of the most impactful statements shared with me was when Gwiingwiishi told me she considers technology to be a “transporter, transformer, and a connector” (Gwiingwiishi, personal communication, May 9, 2018). This positioning simultaneously acknowledges the opportunities and risks that technology presents.

4.2.2 Protocols and Protection

Each of the participants were forthcoming in not knowing exactly what the protocols are surrounding learning online because most protocols they are familiar with refer to in-person interactions and sometimes the written word, not so much the interface of digital spaces. There was extensive discussion in both sharing circles and conversations indicating each person was
very mindful and clear about considerations that need to be made for what is shared online. The essentialist view that knowledge should not be shared online because it could be dangerous seems inaccurate (because there are ways to ensure some element of safety and protection) and because that is an element of coping out of hard work. Aandeg specified, it will be hard to create protocols in a process of achieving consensus among nations with different practices, however this is not an excuse to not take any action at all. Only two participants were in their early 30s and the rest in their 20s, and as such, each one of them have grown up with digital spaces and understand what it means to have something live forever online because the Internet is a place where we are unable to guarantee safety. Three participants acknowledged that they were just beginning to learn about protocols for their community, but that they were willing to continue learning. The remaining seven considered their knowledge of protocols informative but limited in application for understanding translation of protocols for online spaces. The humility and dedication they offered when considering protocols was clear throughout the many stories they shared. The youth also requested action by community leaders; encouraging everyone to overcome protectionist behaviours, finding ways to acknowledge those that do share information online, and being acutely aware of the risks of not sharing, creating, or acknowledging protocols for online spaces. Every one of the youths occupy myriad spaces online and called repeatedly for guidance on how to respectfully follow protocols to protect Indigenous Knowledge that exists online, even offering to help explore new ways to share appropriate information to those seeking it and develop new protocols of that was the desire of knowledge keepers.

The call for assistance from youth to help understand, or potentially create, protocols that would protect Indigenous Knowledge online is inspiring and should encourage communities to reflect upon how we engage with youth. The young ones are increasingly comfortable online,
and they are well-versed on the assimilation risks that exist with anything shared in digital spaces, however they demonstrated reverence and willingness to engage with knowledge keepers to create ways that respect the knowledge and bring the teachings to youth in a good way. I felt particularly moved by the explicit reminder from both Aandeg and Gwiingwiishi that the cultural knowledge exists because of the dedication of our knowledge keepers. Often times, this meant struggling to survive through residential schools and intense attempts at assimilation. They both shared the importance of approaching any knowledge sharing with the deep gratitude of the work that Elders did to preserve what is important and formative for us as Indigenous peoples.

4.2.3 Indigenous Knowledge

Protocol and protection were very closely connected to the constellation of Indigenous Knowledge (IK). Much of our discussions on IK focused on protecting knowledge, and a desire to understand what protocols should be followed. This was highlighted as separate constellation due to the unique considerations of what constitutes IK. There were discussions of place names with Waabizii, considerations of regalia being posted online with Meme, and even land-based teachings with Aandeg. The yearning of the youth to connect with Indigenous knowledge was often tempered with a hesitance because of a perceived lack of understanding of appropriate protocol. Often this was positioned as motivation for seeking out further information online as engaging with knowledge online is seen as less intimidating for participants than approaching someone in person. Further, a majority of the ten participants clearly stated their practice of being cautious of what information they came across online. This is likely due to the fact that most of the participants in the study had attended or were currently attending post-secondary and as such, were comfortable with research practices online and ensuring the validity of information through verification. Although two participants considered this to be instinctual, it is an
important reminder that while these youth seeking Indigenous knowledge were able to discern what kinds of information online should be approached with caution, this may not be the case for all.

4.2.4 Connection

As highlighted in the technology section, the vast majority of participants said the work of seeking language learning opportunities online is not about finding a substitution for in person relationship, rather it is a step to further connection. Seven of the ten participants explicitly stated this, while the remaining three alluded to it or agreed with another participant in the sharing circle. Moreover, online connections are what they feel is most familiar. Engaging with others online is how they build relationships and make mistakes in a space that feels safe and comfortable, which was echoed in the literature for many second language learners (Chapelle, 2009). While having a connection that exists entirely online is not an entire solution, participants did see it as a step in the right direction. Half of the participants consider a connection online to be an invitation to a relationship that could be developed in person once the digital foundation is built. These youth shared that they are using technology to start a connection, then meet in person, then visit the community, framing it all as a part of the learning journey. Bine and Zhiishiib specifically said they use technology as a means to maintain connection rather than to begin because they grew up in community. The stars in this constellation connected strongly to other constellations but due to the frequency of discussion amongst participants centered on or specifically mentioning connection, I chose to highlight it as an important constellation of its own.
4.2.5 Learning

The exponential progress of technology and apps was a focus of discussion amongst all the participants. They acknowledged there is an element of what is desired in learning-focused apps, but there are many components missing. Apichi, Diindiisi, Meme, and Waabizii specifically noted the limited engagement opportunities within apps was seen as detrimental to creating connection and developing community relationships. Further, there was a great deal of critique on the usefulness of apps that are limited in scope, interactivity, and engagement, particularly for language learning. Many participants admitted to struggling with pronunciation in their language learning journeys but were unable to discern their own pronunciation because there was no active engagement in the apps they were using. Meme further identified this experience as a key motivator for seeking out informal learning via Facebook. Following these critiques, it was repeatedly stated that without technology or apps there would be little or no understanding for the youth at all, so they did take the time to acknowledge their gratitude that the information exists at all.

The lack of clear protocols on whether learning online is even legitimate was a concern mentioned by participants and again highlights the desire to pursue cultural learning in a good way. Four of the youth stated the only reason they have to seek out information online is because of the success of colonial policies that resulted in family members hesitation or refusal to share knowledge as a result of residential schools. There was further discussion about the comfort of learning online for many of the participants. This is likely due to the age of participants since most of them were in their mid and early 20’s, with two participants in their early 30’s, as well as the skills developed as post-secondary students. Of particular interest was the desires shared by youth to access learning opportunities that were both meaningfully developed, and respectfully
engaged Indigenous protocols. When specifying what kinds of learning activities would be ideal, youth asked for opportunities to have communities of learners engaging and learning together. They asked for places to engage with speakers to they could work on their pronunciation, and they longed for relevant information that was delivered in flexible formats. When I asked what these opportunities would look like, youth were very creative in offering solutions and staying open minded to options that the Elders and knowledge keepers are comfortable with. Half of the participants suggested one-on-one or directly engaged video calls between a speaker and learner or small group of learners for language learning, with three others supporting that suggestion with the sharing circles. The youth identified this as an opportunity to protect the knowledge from being shared widely, while increasing language proficiency, technological skills, and building relationships. Meme, Diindiisi, and Apichi referred to language teachers sharing pre-recorded videos on social media sites such as Facebook as an important learning tool for them because it provided facial expressions, pronunciation, as well as cultural story and context for them.

4.2.6 Language

Language was an important component of the conversations I had with all participants. They offered deep reflections on the importance of language, often referring to the need for context within language learning as one of the motivations for seeking respectful knowledge sources. The need for context arose throughout discussions on language learning as one of the critiques of the limitations of current apps, as well as one of the important aspects of connecting to Indigenous knowledge and their own identities. Without context and connection to the land, the meaning behind the language can be lost and youth considered this to be a reason for caution when learning Indigenous language in limited-engagement places such as apps.
The power of social media and its impact on Indigenous language revitalization was particularly interesting. Seven participants stated they felt motivated and inspired to learn more language when they saw others posting in their language in their social media feeds. Even when youth were unable to understand what was written, they found the act of seeing the language as empowering and further encouragement to continue their own learning journeys. Those who were accessing language learning opportunities through social media sites such as Cree Simon Says on Facebook found the ability to read comments and learn about different dialects particularly helpful.

The plethora of formats for learning language online such as videos in social media spaces were often cited as most helpful because participants could hear people speaking the language, see the way the speaker’s lips moved, and read through comments to understand dialect differences. Further, they found videos flexible and accessible no matter what time of the day they were engaging with learning practices and considered video formats to be akin to sitting down with someone face-to-face. Although there was no real-time interaction, the ability to simulate an in-person encounter helped the participants feel bonded with the language instructor regardless of whether they knew her or him offline or not. Audio files were highlighted as important but less helpful than video. Apps were cited as an important tool for learning language because they often presented the only opportunity youth had to learn, but as previously stated, the lack of interactivity and inability to stay current resulted in reduced uptake and less favourable assessments from the youth.

4.2.7 Identity

Both sharing circles and four of the one-on-one conversations began with a discussion centred on youth identity. Engaging with language learning, understanding cultural protocols, and
connecting with communities were all ways for youth to develop their sense of self and understand what it meant to them to be Indigenous, thus there were strong connections between these constellations. The challenges of dealing with family members who resisted or denied Indigenous identity required commitment and ingenuity for youth to find ways to gain understanding and develop their own Indigenous identity.

For Bine and Zhiishiib who grew up in community and connected to the teachings, technology provided an important opportunity to maintain their identity as a community member. They pointed out the importance that this foundational knowledge provided them the understanding to filter out information online that was irrelevant or contrary to their own teachings and instead offered a way to reaffirm who they are. Further, these digital engagements offered information about what was happening in home communities, allowing them to stay involved in community issues, even if through reduced capacity.

Participants who were building up their understanding of identity through online means such as Diindiisi, and Beshkwe found technology helpful in myriad ways. Diindiisi found historical community recordings of songs, Beshkwe connected with cousins through Instagram and a few others shared experiences of relations found through their social media networks that built relationships that would develop their understanding of their own family.

Whether participants grew up in their Indigenous territory, urban spaces, or some combination thereof, there was consensus on the fact that technology offers a place for youth to engage with identity development as a process. Again, the importance of context arose within each discussion as many participants felt their existing knowledge helped them filter what information is relevant to them and what could be detrimental or inaccurate. Six participants highlighted the ability to work through challenging notions of identity with communities of
social media connections as a critical part of building confidence to continuing to pursue more knowledge. Seeing language online inspires pride in many of the participants and the ability to write posts in their own language, whether a few words or complete sentences, was seen as an act of resistance to colonialism and resurgence of Indigenous knowledge. In the same vein, Bine considered language immersion and fluency a new form of identity hierarchy and cautioned community members to be gentle with learners and consider the importance of encouraging small steps with positivity and not judgement, much as Aandeg’s story of the young man suggested.

Participants were honest and forthcoming about the cost of living in urban spaces and perceptions in the community that this made them city folk. A few participants grappled with whether they were even “Native enough” to seek out the knowledge in the first place. Struggling through developing a sense of self and confidence was captured best for me in a statement from Apichi when she said she “googled [her] way through being Native” (Apichi, personal communication, May 15, 2018). I found this profoundly important as it demonstrates the desire of youth to connect with identity in a meaningful way and clearly shows the ubiquitous youth practice of seeking information online.

4.2.8 Colonial Policy

The legacy of colonial policy was present throughout the conversations I had with all of the youth, but five participants explicitly identified colonial legislation and its impacts on their family as a reason for their online engagements. The discussions on identity were heavily rooted in colonial thinking of blood quantum and status cards, with Diindiisi readily acknowledging that this thinking results in her own questioning of self. Indian Residential Schools were mentioned multiple times by many participants, with four participants sharing they had family members
attend these institutions. The resulting trauma for family members unwilling or unable to share cultural knowledge left these youth in a place of seeking out their own opportunities to understand our communities instead of learning from family in the traditional way. Moreover, more than half of the youth spoke to the displacement of their families from land and the resulting lack of context for much of the language and cultural learning they pursue online. While specifying they do not blame their own family members for being unable to provide the connection the longed for, they did refer to that deep desire on many occasions. Finally, youth perceived cultural learning online as a form of resurgence and active resistance to ongoing policies and legacies of colonialism. Bine stated this act is “empowering, symbolic, and a tangible consequence of resistance” (Bine, 2019, p. 3). After acknowledging the limits of technology, youth also pointed to opportunities technology offers as a form of revitalization and reconnection for Indigenous people and communities.

4.2.9 Social Media

Social media (SM) was the largest constellation to emerge from the research. SM was established as the preferred form of technology for learning and engaging with cultural knowledge by youth participants. Additionally, the variety of SM platforms that are utilized, though broad, found Instagram and Facebook to be the favoured platforms. The informal learning opportunities that offer flexibility in time, length of engagement, and level of participation were all cited as important aspects for the youth. What appealed to many participants was the ability to partake in small increments as they felt comfortable as well as the ability to pause and replay videos they watched. Further, seven participants specified that their SM profiles were carefully cultivated spaces with connections they felt safe with, so learning and making mistakes felt less intimidating than practicing in person. The increasing presence of
Indigenous language, art, clothing, and even ceremony throughout their SM feeds further inspired their desire to learn and encouraged them to share their own journeys.

The perceived sense of safety and belonging within their own network and SM profile is an important part of understanding the participants’ ability to engage with a variety of learning practices including reading, writing, and speaking whether in-person or online. All but one participant stated they felt that they could trust the sources of information they were seeing in their feed due to their own investment in creating a tailored list of followers, and selectively following people and organizations that offered something meaningful to them. This intentional creation of community that is supportive of their learning journeys also resulted in experiences of pride when youth were able to introduce themselves, spell their name in their own language, or even identify the traditional territory where they currently reside.

One of the most interesting elements to emerge from the social media constellation was that of Indigenous meme culture. Multiple youth identified the subculture of Indigenous meme culture on Twitter, Instagram, and Facebook as an integral part of their community engagement. The memes often reflected current topics in Indigenous politics, youth culture, and even language learning. While some memes offer critiques of the current state, some create motivation for youth to continue their learning journey and even offer validation that they are part of the Indigenous community because they understand the relevance of said memes. One particular example of meme culture identified by Diindiisi, was that of Indigenous slang that was then incorrectly taken up by non-Indigenous people within SM networks. Diindiisi understood that being able to identify this mistake indicated she was part of the Indigenous community online, if not in person as well.
4.3 Chapter Summary

This chapter introduced the participants’ contributions to this study within the framing of a re-storied (Kovach, 2010) running narrative. To both acknowledge the Anishinaabemowin pseudonyms of birds and acknowledge the reverence with which I approach stories shared with me, I refer to each as story songs. In the second half of the chapter there is an exploration of the how the stars within each story song formed a star that then contributed to constellations and a reading of the sky. The following chapter explores how these findings engage with my research questions and seeks out connections or gaps within existing literature.
Chapter 5: Re-storying the Sky (Discussion)

5.1 Overview

In this chapter I consider the findings based on what I observed and how these results configure within the research questions. I further explore what the findings suggest within the areas of language learning, cultural knowledge, and identity because these three lenses informed my initial questioning of this area of research, was reflected in the participants' stories, and offers areas of established scholarship that could benefit from these findings. Finally, I contextualize this work within previous research and literature on the topics to re-story the sky in a way that highlights the youth voices and offers direction to future research.

Throughout the research process and analysis, I observed a depth of understanding on the areas of language learning, cultural knowledge, and identity issues from each of the participants. They were forthcoming about the limits of the knowledge but shared genuine desire to gain access to teachings in a respectful way that would further develop their own understandings of self. The process of reading the transcripts transported me back to each engagement with the youth and I largely relied on researcher reflections I had noted in the guiding questions as confirmations for the stars I had highlighted within. As I spent time with the transcripts during a process of learning and remembering, I also re-considered how the story songs addressed the central research question, and the sub questions.

Interpreting the findings to address the larger question of looking at how technology influences language and cultural learning and urban Indigenous youth identity, the findings suggest the answer is in myriad ways that are complex, intersectional, and sometimes even contradictory. The youth offered specific examples of how technology contributes to cultural and language learning by highlighting the ways in which they already engage with learning
opportunities through apps, websites, and social media. Further, findings clearly demonstrate that identity development is impacted positively by engaging with technology to seek out and utilize learning opportunities in a way that encourages self-reliance and further community engagement. Forms of technology utilized for said learning within the findings included discussions on hardcopy books, websites, apps, video streaming sites, social media, and various forms of mobile technology. Overall, the findings strongly suggest technology offers ample opportunities for learning and connection which the youth are eager to take up. Findings further demonstrate a balanced approach of creativity and caution by youth seeking out learning opportunities, as well as a particularly encouraging theme of willingness to help contribute to further development and expansion of technology-based learning opportunities.

The first impressions that I had of understanding the constellations that had emerged within the research included acknowledging overlap between constellations, similar to how the gravity of stars influence each other and grow closer or further apart based on the strength of influence. Areas of close overlap were between language and learning, social media and connection, protocols and protection, and social media and identity. Each of the nine constellations have at least one contribution from each participant, although a few constellations were of particular interest to some and resulted in higher contributions to certain areas based on the individual’s interest.

Early on in my reflection process I was surprised by the social media constellation and the number of stars overall, as well as the prominence of the discussion on SM early on in conversations with each participant. The second biggest constellation is language, which was somewhat expected given the original motivation to explore how technology-based language learning is utilized by youth. The next largest constellations were Indigenous knowledge and
protocol, although this was not as surprising based on my first conversation with Beshkwe, the current perspectives in the literature, and my own instincts and understandings of youth perceptions. The constellation for technology did not have as much as I thought it would. This could be because of how I placed the stars in the different places in the sky, as there are different aspects of technology within all of the constellations, but particularly within language, identity, and connection. I have come to see technology almost as a subset of everything, whereby it is simply describing elements of the other constellations. If one revisits the constellation map (Figure 4-1 Constellation map) it is helpful to envision technology as a 3D constellation that is made up of stars from all the other constellations. This is especially relevant if we consider the manner in which we are able to view the skies and stars as humans on earth, interpreting complex 3D spaces in 2D vision.

This research was the result of many great conversations, and as I had hoped, the youth offered the opportunity for me to learn from them as well. Indigenous slang came up through social media and the discussions on Indigenous meme culture, but it could also be viewed as part of language because unless you are part of the Indigenous community you are unlikely to know what the specific word means. There are many examples of the youth sharing profound, thoughtful perspectives on learning in digital spaces and I am truly honoured to have heard them and be entrusted with their care and re-story (Kovach, 2010) them in spaces where the youth voices are needed.

5.2 Constellations Overlap

The process of how constellations came to be was largely a natural process based on my need to visually organize information and colour code as means of further organization. The groupings are largely thematic as a result of pattern seeking, however, there are also relational connections
arising out of similarities amongst stars. Nearly half of the participants stated that they view technology as a tool. Specifically, when considering the use of technology to connect to language and cultural learning opportunities, they unequivocally stated technology should be a first step, a supplement, or a complement rather than a substitution for in-person, contextual learning. Galla (2010, 2016) notes this throughout her work and further heard similar sentiments from the survey respondents in 2016.

The successful adaptability of Indigenous communities pursuing means to preserve and revitalize language was discussed at length in Chapter 2. The participants’ suggestions throughout this study further support the pursuit of adaptability through positioning technology as a tool, specifically as it relates to social media (SM). They demonstrated boundless creativity when considering options for how to utilize technology as a tool if they were designing meaningful learning opportunities for themselves and others. It was noted that utilizing private groups, virtual classrooms, or creating direct connections via video calls could provide a safer way to share information rather than posting widely on the internet. Aandeg highlighted how Musqueam Indian Band has created online spaces that are full of information about the community but protected it in a way so that only community members or select individuals can access it. This cautionary and limited provision of information via digital space echoes some of the work of Wemigwans (2018), ensuring that any sensitive information being places online is treated with reverence as a digital bundle of important knowledge.

Short clips of language videos, with context provided, are well received and widely shared as a promising practice by many of the participants in these conversations. Often the youth mentioned that speaking aloud privately allowed them to develop confidence in their language skills, echoing the work of Chapelle (2009). The ability to watch and hear at their own
pace, in the place of their choosing, with the ability to replay and pause as needed provided an opportunity to engage deeply with the knowledge but also feel more connected to the teacher, even if the teacher was present via pre-recorded video. These videos and the presence of language across social media also presented visual information and connections for youth and community members to see and become curious about the knowledge they are encountering, bringing language speakers to the places where youth are, just as Noori (2011) and Odango (2015) suggest. These acts of revitalization of language learning online could even be interpreted as a response to the Truth and Reconciliation Commission of Canada’s Calls to Action (2015).

Much as Chapelle (2009) noted that language learners are more comfortable making mistakes in digital spaces rather than in-person, many of the youth shared the importance of having safe spaces for them to learn and often this ended up being online. Further, Aandeg reminded knowledge keepers and community members of the gentleness that should be offered to learners as it takes courage to learn something new and being met with distrust or treated as an outsider could result in disconnect or shame. Bine sees how fluency in language is sometimes used to establish hierarchy of Indigeneity and she stressed the negativity that that behaviour could cause. Within the stories shared by participants during this research, they often spoke of learning journeys and an openness to acknowledge that they still have farther to go. Connecting small bits at a time through language, family ties, and community gatherings helped them to build relationship with the communities in way that is not simply imagined but based in reality (Norton, 2013). It feels necessary to reiterate that that the relationships with communities built in digital spaces may begin virtually but often grow in importance online, and sometimes transition to in-person engagements as well. Further, the reality of these relationships to community are
also based in Indigenous ontology in that the connections the youth make to language and cultural teachings also connects them to their ancestors.

5.3 Stars That Make Us Think

Following the previous section, it is clear that there is a great deal of confirmation within the stories shared by participants and the current literature on Indigenous language revitalization and youth engagement. However, the emergence of stars, or important aspects of participant stories that are not currently addressed by scholarship requires acknowledgement.

The importance of connection for Indigenous youth that is fulfilled by technology is addressed within some literature but in a manner that does not engage with the reasoning behind it. Youth highlighted both the flexibility and speed of connection as important aspects of what attracts them to technology. This is a notable area of relational grouping that offers connection to literature, as what is notable about these comments is the youth critiqued apps for language learning as limited in both of these areas, even as scholarship for language learning continues to suggest apps as a promising means for revitalization (Galla, 2016; Morris, 2016). Apps offer some basic language learning opportunities, but they are considered by the youth to be limited in format. There was a desire to have more video and audio presentation of lessons as opposed to relying entirely on written word and the occasional image. Further, in referring to the speed of connection, youth identified the ability to connect with others immediately as one of the most appealing aspects of technology. Apps are limited in relationship engagement as they often hold a pre-designed offering of information, whereas youth consistently mentioned the importance of engaging one-on-one with others.

They referred to the benefits of being able to video chat with a knowledgeable language speaker and read discussions in social media posts from other participants as important ways for
them to build on their learning experience and encourage them to continue participating. Again, there is an emerging trend in literature on how social media sites such as Facebook are contributing to language learning, but the youth in this study also considered social media sites beyond Facebook such as Instagram, YouTube, and Twitter to be the main area for learning (Goode, 2010; Kral, 2010; Oliver & Nguyen, 2017). Apps offer individual nations the ability to design a learning experience that reflects their unique dialect, but funding limitations often prohibit regular updates and ongoing investments to improve interactivity and improvements to mirror technological advancements (Nakata, 2014; Galla, 2016). The fact that social media offers a place for these improvements to occur with participant contribution creates an interesting opportunity to reconsider the focus of language revitalization efforts that prioritize app development.

Scholars such as Wemigwans (2018) have demonstrated how Indigenous Knowledge (IK) can be shared respectfully and safely online. As this is a new area for both scholarship and community protocols, there remains a great deal of resistance in Indigenous communities to contemplate what can or should be shared in digital spaces. Fears of assimilation of IK are well-founded and a reality for Indigenous communities around the world, but it was particularly powerful to hear calls from the youth encouraging decision makers and community leaders to overcome these fears and start engaging in technology. Further, it is essential to recognize the deep respect youth offered in regard to protocols; both acknowledging the limits of their own knowledge but also requesting to be part of determining a respectful way forward. The participants shared the longing to engage with Indigenous knowledge about language, culture, and even community history while simultaneously pointing out the reality of their lives online. The positioning offered by Bine and Diindiisi suggesting this pursuit of knowledge online as an
act of resurgence should inspire leaders and knowledge keepers to engage with youth and
overcome hesitations to at least begin to unpack fears of assimilation as reasoning for avoiding
placing IK online. They sought to demonstrate that engaging in self-directed learning, creating
relationships, and developing their own sense of identity online is normal to them. There was a
great deal of care taken to clarify that the participants were not calling for sacred teachings to be
placed in online spaces, but rather that the foundational teachings and relationships with
community be available through carefully selected digital means. They further offered a
reminder that youth are online and we, as leaders and decision makers, need to meet them where
they are. Noori (2011) also issued a similar call for language learners, but I found it to be
particularly powerful to consider exactly how much time and effort youth spent engaging online.
A good deal of their day-to-day existence is online, and their comfort with online spaces and
technology stems from the fact that this is their reality and those younger than 25 years old in
particular, have never known anything beyond a world where the Internet is at their fingertips.

5.4 New Stars

There are a few stars that stick out for their unique contributions to my understanding of how
Indigenous youth are engaging online. I interpreted these stars as significant outliers or those that
diverge greatly from current literature on the topics of ILR, cultural knowledge, and identity. Indigenous slang emerged early on in the discussions with youth and it was profound for myriad reasons. The slang discussed in this discussion centred on ‘skoden’. Diindiisi highlighted this example as a way of poking fun at settler Canadians who had taken up Indigenous satire news as truth. She went on to further highlight how easily something can be misconstrued online and considered the importance of being diligent about sources of information, checking references and tracing knowledge whenever possible. I found this use of slang, a mash-up of English words
spoken in ‘rez English’, that was then assumed to be an Indigenous word of non-descript origin to be particularly telling. I had also seen the use of this term online throughout my own social media feeds and laughed at the memes that emerged out of this online conversation amongst Indigenous activists. What I had not realized until Diindiisi pointed it out was that the humour in these memes, and the true meaning of the ‘word’ was only known to Indigenous participants within the online communities with which I also found myself a part. Although commentary on skoden abound throughout online channels, Indigenous participants did little to correct assumptions made by non-Indigenous people attempting to understand what the word meant. Instead, there was a sub-discussion occurring through Indigenous social media that created a reverse them-us dynamic that I had rarely experienced as an Indigenous person. The Indigenous online community knew something that the non-Indigenous community was struggling to understand and those that were posting incorrect information were allowed to do so, almost creating a self-identifier as one of ‘them’, and not us. Diindiisi pointed out the importance of this act, as it demonstrated both sovereignty of Indigenous people to share with those they had built relationships with, but it also demonstrated exactly how much space Indigenous people are occupying in various social media platforms. Again, I was humbled to realize that I had not considered the importance that this Indigenous slang demonstrated; Indigenous people are occupying space within social media profiles, creating subsets of language and slang and humour that in turn, create and reinforce Indigenous relationships and communities in new places.

This reconsideration of my own understanding of what slang was emerging through social media also prompted a discussion on meme culture within online communities. Memes have emerged as social commentary throughout social media platforms, but I was specifically intrigued by the sub-culture of meme development that has emerged within Indigenous activism
as teaching tools for a variety of languages as well as cultural practices. Although there are plenty of examples of advertising executives attempting to reach youth through ill-conceived memes as advertisements, engaging youth as co-authors and co-creators with knowledge holders could offer new opportunities for sharing Indigenous knowledge, creating and maintaining relationships amongst generations, and reaching Indigenous community members through digital means.

The possibilities for new connections to be formed and maintained through digital means including social media is an area that seems largely dominated by individuals and grassroots institutions. Social media provides a free classroom without the financial or physical constraints of brick and mortar, while simultaneously offering an informal archive of previous lessons. The youth that participated in this study demonstrate a small sample of the larger Indigenous youth population, but the enthusiasm for participating in the creation, delivery, and maintenance of learning resources for themselves and others is an opportunity that should be explored. While scholars such as Odango (2015) call for scholars, policymakers, and leaders to listen closely to what the youth are saying, I suggest we must go further to act on what the youth are saying. Noori (2011) suggested we must place ourselves where the youth are, and this study demonstrates they are heavily involved in social media spaces. Furthermore, they reinforce Noori’s position by requesting more opportunities to learn as well as the chance to participate in the creation of such.

Willingness on the part of the youth to contribute to new learning opportunities for community members offers potential for intergenerational bonding and a return to respecting the agency of younger members in our communities. This explicit desire to participate in all the steps of language and cultural learning resources by youth is encouraging as it addresses ongoing
challenges such as a wide variety of dialects, constantly evolving technology, and limited budgets. Additionally, skills such as coding and digital literacy or technacy are often included in curricular competencies across provincial curricula in Canada (British Columbia Ministry of Education, 2018). Engaging skills the youth already possess such as creating and maintaining social presence, creative output and community building online, and an ease with technology lays a foundation of potential for creating meaningful learning opportunities for community members seeking language and cultural teachings.

Finally, the opportunity of youth participation in the creation, delivery, and maintenance of language and cultural learning spaces via social media also creates an opportunity for intergenerational mentorship. Although I debated including integrational mentorship as a new star because it has roots in traditional pedagogical strategy in Indigenous communities, I suggest mentorship that is centred around, and supported by, technology offers a new form of mentorship that exists both as a relationship that could be face-to-face or virtual. There is ample room for Elders and youth to decide what form the mentorship might take, be it a combination of in-person and digital means, or entirely online. Nonetheless, I envision new relationships budding out of the willingness of youth to engage if there are knowledge keepers that are willing to engage on the other end.

5.5 Chapter Summary

The findings of this research overwhelmingly indicate technology offers flexible, adaptable, and rapid connections to those seeking Indigenous Knowledge. The youth explicitly stated the importance of accessing this information as essential to developing their own identities and connected their motivation to do so as both a practice of resurgence and a way to carefully navigate histories of colonial policies and legacies within the family. Although some areas of the
findings challenge current literature, such as redirecting language revitalization efforts to social media and one-on-one video calling opportunities instead of app development, the suggestions offered by youth are reasonable and founded in principles of respect. I further suggest surprising findings such as the emphasis on social media as opposed to more structure language learning opportunities such as website or apps create a sense of urgency to address the shifting interest in youth priorities while simultaneously responding to risks of knowledge being lost due to knowledge keepers passing on.
Chapter 6: Echoing Stories and Voices (Conclusion)

This study serves as an example of how Anishinaabe methodology can exist within academe and demonstrate successful, respectful, and meaningful engagement with urban Indigenous youth. Although practices I utilized throughout this research are not exclusive to Anishinaabe people, I position my teachings within my own community so that my choices and approaches are rooted in the source of knowledge I relied on. The voices of youth and the stories they shared are placed in the centre of this work in a way that minimizes, yet still acknowledges the critical role of researcher within a scholarly study. Youth shared stories that supported areas of ongoing research such as a need for more Indigenous language revitalization efforts, but they further challenged leaders and scholars to go beyond traditional methods and consider new technologies and new formats for teaching such as video-calling, online classrooms, and social media sites dedicated to learning. The discussions on the importance of meme culture within Indigenous social media is an area that emerged from this study and requires further exploration. The necessity of addressing the outcomes of this research cannot be overstated as Indigenous languages remain in a perilous state of low fluency, with many at risk of being lost (Statistics Canada, 2016). Further, engaging youth in cultural events and building supportive communities remains one of the strongest protective factors against negative socio-economic and health outcomes (Hallett, Chandler, & Lalonde, 2007). The youth in this study unequivocally shared their desires to see more learning opportunities for community members and clearly demonstrated their knowledge on the topic and willingness to contribute to future efforts. Engaging youth in a way that develops their skills, confidence, and community supports for the benefit of all community members is an opportunity that should be utilized at once.
6.1 Strengths

This research is unique and is rooted in the strength of my Anishinaabe teachings. The entire process of the Ph.D. was culture led, culture driven, and considered through my cultural interpretation. I began the Ph.D. with ceremony both through continuing my cultural work in the community and through participating in ceremony to ensure that I was listening to the ancestors. The protocols that guided the development and delivery of this research acknowledge both the Anishinaabe protocols of *bimaadziwin* (living in a good way), but also the ethical considerations of the academic institution. The particular Indigenous methodology utilized within this study built upon those of academic Elders such as Archibald (2008), Kovach (2009), and Wilson (2008) to incorporate Anishinaabe teachings I have been given, creating a methodology that is uniquely informed by my own life experience, traditional teachings, and academic knowledge.

The importance of having Indigenous youth voice at the core of this research was intentional from the first conceptualization of this process but became further clarified through my own understanding of the role of *ajijak* (crane) clan members to respectfully hold the stories of our community and share them with others. The training and mentorship that I have participated in as *Anishinaabekwe* (Anishinaabe woman) provided discipline, respect, reverence, and motivation for conducting the research in this way. Drawing on the teachings of what it means to be given the responsibility of holding traditional teachings led me to trust that engaging in a “bottom-up” (p. 14, Rawana, Sieukaran, Nguyen & Pitawanakwat, 2015) approach and thematic analysis of participants’ stories protected the meaning and value that they wished to share. I followed a protocol that taught me what I was seeking; to learn more about my culture and to learn more *Anishinaabemowin* (Anishinaabe language). One of my language teachers taught me the word that I was describing when I shared my research process with him:
Indaganawanimaad, which means ‘I will look after them (living beings)’. This captures both how I approached the careful process I undertook with participants but also with the stories they shared with me. The stories are living beings that they shared with me, they contained all of the important information and teachings about how to move forward and offered their own interpretation without needing me to analyze. It is important to distinguish that while I avoided applying pre-determined codes to interpret the research, the meanings that were elicited throughout the thematic analysis offer clear and impactful information for both policy makers and community leaders to utilize immediately. Engaging youth to create more community connections and resources is a step that can be taken to collaboratively determine what direction each community desires.

This study engaged with participants both in a sharing circle format that allowed participants to build upon each other’s stories, but also in one-on-one conversations to allow others that wished to participate a chance to do so. The combination of both methods provides a unique opportunity to hear stories shared by youth in a group and in one-on-one conversations. Although one might assume individuals were more willing to share directly with the researcher, participants in the groups shared they felt strengthened both by the cultural component of the process and the fact that other people experienced similar things that they were more willing to share as a result. This study further responds to the call from Tuck (2009) to conduct research with(in) Indigenous communities that is the antithesis to damage-centered and damage-causing research. Instead, this research builds upon the strengths already being demonstrated by youth and focuses on opportunities for Indigenous communities in the future.
6.2 Limitations/ Lessons

This study was conducted in the lower mainland of British Columbia, with self-declared urban Indigenous youth. The small sample size of 10 participants could be seen as a limitation but should also be viewed as a first step with a positive outcome, perhaps encouraging similar research projects in other urban areas. More specifically, the youth in this study are also considered young adults (18-35 years old), however their experiences of growing up in a digital age and working to reconnect with Indigenous knowledge and communities due to the impacts of colonial policy remain impactful and relevant. Further work on this topic could benefit from engaging the 14 to 18-year-old demographic, in multiple urban spaces, particularly given how quickly technology changes and certain platforms fall in and out of popularity.

Additionally, because of the age range of this study, and likely the location of the engagements at the University of British Columbia, most participants were/are post-secondary students that have some training in research, which suggests results could be different for other populations based on the participants’ skills for seeking out reliable information in various locations, including online. Finally, due to the aforementioned rapid increases and changes in technology, this study could be limited in its impact if social media platforms change too quickly and too drastically by the time the outcomes are acknowledged by policymakers and leaders.

Another area of limitation is that of identity intersectionalities such as gender and sexual identity. As discussed in the participant selection section, it was my intent to open the research to urban Indigenous youth who felt the desire to contribute to the research. I did not specify gender ratios or identifiers to participants as it was not my intention to undertake a gendered analysis. Further, personal identifiers of participants such as gender or sexual identity were not utilized unless specifically shared by participants and highlighted as an important aspect of their
experience with technology within the context of this study. Therefore, comparative codes would not be available, and would be likely ineffective given the limited size of the study.

6.3 Implications

The implications for this study are positive and far-reaching. First, this study demonstrates that urban Indigenous youth are incredibly knowledgeable and willing to participate in efforts to increase learning opportunities for community members. The knowledge they possess on digital tools and the inherent risks associated with appropriation and the legacies of colonial policy demonstrate a depth of knowledge and respectful consideration that should be seen by all involved in developing online resources for Indigenous communities. Bringing youth into this process offers the potential for increasing positive outcomes for digital literacies, intergenerational bonding, skill building, and even better use of funds for learning projects.

Funding for language and cultural learning should reflect the preferences of the desired learners, and in this case, youth seeking information about language and cultural teachings are requesting more flexible learning that builds relationships between knowledge holder and learner. Funneling money into ubiquitous apps with little to no connection to community relationships and limited updates will result in little youth participation and could jeopardize funding for future years due to potential framing of such projects as failures. Both statistics and community leaders acknowledge the ongoing loss of knowledge as Elders and knowledge keepers pass on making action on learning opportunities critical in order to preserve the knowledge and share it with younger community members to ensure the longevity of our cultures.
6.4 Future Directions

Ideally, future directions should include youth as active participants in planning, implementation, delivery, and evaluation of language and cultural learning initiatives. Engaging youth in a way that encourages and develops technacy skills that will serve them well in their educational and professional journeys is just one benefit of bringing youth into these kinds of development projects. Further, if youth are provided the opportunity to design and develop online repositories, create connections, and maintain online communities of knowledge, a great deal of costs could be saved from outsourcing to non-Indigenous contractors that are lacking in the community context and understanding the connections between language, identity, and culture. The development of youth self-esteem and leadership as a result of participating in work that both preserves and revitalizes Indigenous language and culture increases resiliency and important life skills.

The implications list myriad reasons further work on addressing the outcomes of this study and expanding on other youth perspectives on the same topic is both timely and reasonable. Additional work could expand on this study in the future as technology and preferred social media platforms change in both style and capabilities. Treating the stories shared by participants as living stories allows for the possibility that they can grow and change, which acknowledges both the complexity of the digital interface and Indigenous ways of understanding. As I have echoed the stories youth shared with me here in this document, it is my hope that the echoes remain with the readers of this work. Part of this echoing will continue through public presentations of this research and support for further projects that prioritize youth voices and contributions to community revitalization efforts. This work provides concrete evidence that youth are longing to be engaged in language, culture, and identity discussions, particularly those
that focus on incorporating technology. It is my hope that this research and the continued effort to echo these stories will impact the directions of pedagogical design and implementation for Indigenous communities in the future, and as such, I will continue to advocate for meaningful youth involvement in language and cultural revitalization through academic forums, conference presentations, and personal conversations. Given the recent announcement of the Indigenous Languages Act (2019) in Canada, it is critically important that funding agencies, government bodies, and communities draw on youth voices- such as those echoed in this study- in a timely manner to ensure that the future caretakers of this knowledge are engaged throughout the planning, implementation, and delivery process of revitalization efforts.
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Appendix

Research Questions and Prompts

G= Guiding question
B= Brainstorm question
P= Prompt question(s)

Sharing Circle #1

(G1) How does technology contribute to urban Indigenous youth culture and language learning?
(B1) What do you think of when you hear the world technology?
(P1) How do you use technology? How is culture represented online? Where do you see Indigenous language in technology-based spaces?

Sharing Circle #2

(G2) How is technology that focuses on language and cultural learning impacting identity development of urban Indigenous youth?
(B2) How is your culture and/or language represented in your online profile?
(P2) What kinds of technology provides language learning opportunities for youth? (i.e. apps, websites, CD-ROMS)? Can you connect with culture through technology? What kinds of language and culture learning opportunities would you engage with online?

Sharing Circle #3

(G3) What forms of technology are youth using to assist with their language and cultural learning goals, and what are the learning outcomes?
(B3) Does anyone have examples of language or cultural learning online?
(P3) What do you like about this app or website? What is missing? How would you make this better?